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26 S7
2601 S3
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20, 16, 14, 13, 10, 5
4, 2

7/3/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09694678 96216278
HERG sequence correction [letter]
Trudeau MC; *Warmke JW*; Ganetzky B; Robertson GA
Science (UNITED STATES) May 24 1996, 272 (5265) p1087, ISSN 0036-8075
Journal Code: UJ7
Languages: ENGLISH
Document type: LETTER; PUBLISHED ERRATUM

7/3/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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09476765 95406765
New potassium channel gene families in flies and mammals: from mutants to molecules.
Ganetzky B; *Warmke JW*; Robertson G; Pallanck L
Laboratory of Genetics, University of Wisconsin, Madison 53706, USA.
Soc Gen Physiol Ser (UNITED STATES) 1995, 50 p29-39, ISSN 0094-7733
Journal Code: UU2
Languages: ENGLISH
Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

7/3/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09473444 95403444
Characterization of tissue-expressed alpha subunits of the high conductance Ca(2+)-activated K+ channel.
Knaus HG; Eberhart A; Koch RO; Munujos P; Schmalhofer WA; *Warmke JW*; Kaczorowski GJ; Garcia ML
Institute for Biochemical Pharmacology, University Innsbruck, Austria.
J Biol Chem (UNITED STATES) Sep 22 1995, 270 (38) p22434-9, ISSN 0021-9258
Journal Code: HIV
Languages: ENGLISH

Document type: JOURNAL ARTICLE

7/3/4 (Item 4 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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09397958 95327958

HERG, a human inward rectifier in the voltage-gated potassium channel family.

Trudeau MC; *Warmke JW*; Ganetzky B; Robertson GA

Department of Physiology, University of Wisconsin Medical School, Madison 53706, USA.

Science (UNITED STATES) Jul 7 1995, 269 (5220) p92-5, ISSN 0036-8075

Journal Code: UJ7

Languages: ENGLISH

Document type: JOURNAL ARTICLE

7/3/5 (Item 5 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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08896879 94211879

A family of potassium channel genes related to eag in Drosophila and mammals.

Warmke JW; Ganetzky B

Laboratory of Genetics, University of Wisconsin, Madison 53706.

Proc Natl Acad Sci U S A (UNITED STATES) Apr 12 1994, 91 (8) p3438-42, ISSN 0027-8424 Journal Code: PV3

Contract/Grant No.: NS15390, NS, NINDS

Languages: ENGLISH

Document type: JOURNAL ARTICLE

7/3/6 (Item 6 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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08397154 93107154

Myosin light chain-2 mutation affects flight, wing beat frequency, and indirect flight muscle contraction kinetics in Drosophila.

Warmke J; Yamakawa M; Molloy J; Falkenthal S; Maughan D

Department of Molecular Genetics, Ohio State University, Columbus 43210.

J Cell Biol (UNITED STATES) Dec 1992, 119 (6) p1523-39, ISSN 0021-9525 Journal Code: HMV

Contract/Grant No.: R01 AR40234, AR, NIAMS; GM33270, GM, NIGMS

Languages: ENGLISH

Document type: JOURNAL ARTICLE

7/3/7 (Item 7 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08068270 92206270

Frequency analysis of skinned indirect flight muscle from a myosin light chain 2 deficient mutant of *Drosophila melanogaster* with a reduced wing beat frequency.

Yamakawa M; *Warmke J*; Falkenthal S; Maughan D

Department of Physiology and Biophysics, University of Vermont, Burlington 05405.

Adv Exp Med Biol (UNITED STATES) 1991, 304 p455-60, ISSN 0065-2598

Journal Code: 2LU

Contract/Grant No.: RO1 AR40234, AR, NIAMS

Languages: ENGLISH

Document type: JOURNAL ARTICLE

7/3/8 (Item 8 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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07916563 92054563

Similarities in amino acid sequences of *Drosophila* eag and cyclic nucleotide-gated channels.

Guy HR; Durell SR; *Warmke J*; Drysdale R; Ganetzky B

Laboratory of Mathematical Biology, National Cancer Institute, National Institutes of Health, Bethesda, MD 20892.

Science (UNITED STATES) Nov 1 1991, 254 (5032) p730, ISSN 0036-8075

Journal Code: UJ7

Languages: ENGLISH

Document type: JOURNAL ARTICLE

7/3/9 (Item 9 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07743635 91262635

A distinct potassium channel polypeptide encoded by the *Drosophila* eag locus.

Warmke J; Drysdale R; Ganetzky B

Department of Zoology, University of Cambridge, United Kingdom.

Science (UNITED STATES) Jun 14 1991, 252 (5012) p1560-2, ISSN
0036-8075 Journal Code: UJ7
Contract/Grant No.: T32GM07131, GM, NIGMS; NS15390, NS, NINDS
Languages: ENGLISH
Document type: JOURNAL ARTICLE

7/3/10 (Item 10 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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07681623 91200623
Molecular characterization of eag: a gene affecting potassium channels in
Drosophila melanogaster.
Drysdale R; *Warmke J*; Kreber R; Ganetzky B
Laboratory of Genetics, University of Wisconsin, Madison 53706.
Genetics (UNITED STATES) Mar 1991, 127 (3) p497-505, ISSN 0016-6731
Journal Code: FNH
Contract/Grant No.: T32 GM07131, GM, NIGMS; NS15390, NS, NINDS
Languages: ENGLISH
Document type: JOURNAL ARTICLE

7/3/11 (Item 11 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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06974905 89276905
Co-localization to chromosome bands 99E1-3 of the Drosophila melanogaster
myosin light chain-2 gene and a haplo-insufficient locus that affects
flight behavior.
Warmke JW; Kreuz AJ; Falkenthal S
Department of Molecular Genetics, Ohio State University, Columbus 43210.
Genetics (UNITED STATES) May 1989, 122 (1) p139-51, ISSN 0016-6731
Journal Code: FNH
Contract/Grant No.: GM33270
Languages: ENGLISH
Document type: JOURNAL ARTICLE

7/3/12 (Item 1 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

15109553 Genuine Article#: VJ900 No. References: 38
Title: PROPERTIES OF 3 BACULOVIRUS-EXPRESSING GENES THAT ENCODE
INSECT-SELECTIVE TOXINS - MU-AGA-IV, AS-II, AND SH-I

Author(s): PRIKHODKO GG; ROBSON M; *WARMKE JW*; COHEN CJ; SMITH MM; WANG PY
; WARREN V; KACZOROWSKI G; VANDERPLOEG LHT; MILLER LK
Corporate Source: UNIV GEORGIA,DEPT ENTOMOL/ATHENS//GA/30602; UNIV
GEORGIA,DEPT ENTOMOL/ATHENS//GA/30602; UNIV GEORGIA,DEPT
GENET/ATHENS//GA/30602; MERCK & CO INC,MERCK RES LABS,DEPT MEMBRANE
BIOCHEM & BIOPHYS/RAHWAY//NJ/07065; MERCK & CO INC,MERCK RES LABS,DEPT
MOL BIOL & GENET/RAHWAY//NJ/07065
Journal: BIOLOGICAL CONTROL, 1996, V7, N2 (OCT), P236-244
ISSN: 1049-9644
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

7/3/13 (Item 2 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

14602585 Genuine Article#: TZ682 No. References: 0
Title: FUNCTIONAL EXPRESSION OF DROSOPHILA-PARA NEURONAL SODIUM-CHANNELS IS
MODULATED BY THE MEMBRANE-PROTEIN TIPE
Author(s): *WARMKE JW*; REENAN R; WANG P; ARENA J; WANG J; WUNDERLER D; LIU
K; KACZOROWSKI G; VANDERPLOEG L; GANETZKY B; COHEN CJ
Corporate Source: MERCK SHARP & DOHME RES LABS/RAHWAY//NJ/07065; UNIV
WISCONSIN/MADISON//WI/53706
Journal: BIOPHYSICAL JOURNAL, 1996, V70, N2 (FEB), PTU335
ISSN: 0006-3495
Language: ENGLISH Document Type: MEETING ABSTRACT

7/3/14 (Item 3 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

14602582 Genuine Article#: TZ682 No. References: 0
Title: HETEROLOGOUSLY EXPRESSED DROSOPHILA-PARA, A SODIUM-CHANNELS ARE
HIGHLY SENSITIVE TO PYRETHROIDS AND NATURAL TOXINS
Author(s): COHEN CJ; SMITH MM; REENAN R; GARSKY V; WANG P; WANG J; GANETZKY
B; *WARMKE JW*
Corporate Source: MERCK SHARP & DOHME RES LABS/RAHWAY//NJ/07065; UNIV
WISCONSIN/MADISON//WI/53706
Journal: BIOPHYSICAL JOURNAL, 1996, V70, N2 (FEB), PTU334
ISSN: 0006-3495
Language: ENGLISH Document Type: MEETING ABSTRACT

7/3/15 (Item 4 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

12146514 Genuine Article#: KP517 No. References: 0
Title: FUNCTIONAL EXPRESSION OF THE DROSOPHILA-EAG K+ CHANNEL GENE
Author(s): ROBERTSON GA; *WARMKE JW*; GANETZKY B
Corporate Source: UNIV WISCONSIN,DEPT PHYSIOL/MADISON//WI/53706; UNIV
 WISCONSIN,GENET LAB/MADISON//WI/53706
Journal: BIOPHYSICAL JOURNAL, 1993, V64, N2 (FEB), PA340
ISSN: 0006-3495
Language: ENGLISH Document Type: MEETING ABSTRACT

7/3/16 (Item 5 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

12146511 Genuine Article#: KP517 No. References: 0
Title: A NOVEL POTASSIUM CHANNEL GENE FAMILY - EAG HOMOLOGS IN DROSOPHILA,
 MOUSE AND HUMAN
Author(s): *WARMKE JW*; GANETZKY B
Corporate Source: UNIV WISCONSIN,GENET LAB/MADISON//WI/53706
Journal: BIOPHYSICAL JOURNAL, 1993, V64, N2 (FEB), PA340
ISSN: 0006-3495
Language: ENGLISH Document Type: MEETING ABSTRACT

7/3/17 (Item 6 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
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10719306 Genuine Article#: FB298 No. References: 4
Title: MOLECULAR CHARACTERIZATION OF EAG - A GENE AFFECTING POTASSIUM
 CHANNELS IN DROSOPHILA
Author(s): *WARMKE J*; DRYSDALE R; KREBER R; GANETZKY B
Corporate Source: UNIV WISCONSIN,GENET LAB/MADISON//WI/53706
Journal: JOURNAL OF NEUROGENETICS, 1991, V7, N2-3, P151
Language: ENGLISH Document Type: MEETING ABSTRACT

7/3/18 (Item 7 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

10693189 Genuine Article#: EZ708 No. References: 56
Title: MOLECULAR CHARACTERIZATION OF EAG - A GENE AFFECTING POTASSIUM
 CHANNELS IN DROSOPHILA-MELANOGASTER
Author(s): DRYSDALE R; *WARMKE J*; KREBER R; GANETZKY B
Corporate Source: UNIV CAMBRIDGE,DEPT ZOOL,DOWNING ST/CAMBRIDGE CB2

3EJ//ENGLAND//; UNIV CAMBRIDGE,DEPT ZOOL,DOWNING ST/CAMBRIDGE CB2
3EJ//ENGLAND//; UNIV WISCONSIN/MADISON//WI/53706
Journal: GENETICS, 1991, V127, N3, P497-505
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

7/3/19 (Item 8 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

09978097 Genuine Article#: CN428 No. References: 1
Title: PROPERTIES OF SKINNED MUSCLE-FIBERS FROM MYOSIN LIGHT CHAIN 2
DEFICIENT FLIGHTLESS MUTANTS OF DROSOPHILA-MELANOGASTER
Author(s): YAMAKAWA M; *WARMKE J*; FALKENTHAL S; MAUGHAN D
Corporate Source: UNIV VERMONT,DEPT PHYSIOL & BIOPHYS/BURLINGTON//VT/05405;
OHIO STATE UNIV,DEPT MOLEC GENET/COLUMBUS//OH/43210
Journal: BIOPHYSICAL JOURNAL, 1990, V57, N2, PA411
Language: ENGLISH Document Type: MEETING ABSTRACT

7/3/20 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 1996 Elsevier Science B.V. All rts. reserv.

10159841 EMBASE No: 96343701
Potassium currents expressed from Drosophila and mouse eag cDNAs in
Xenopus oocytes
Robertson G.A.; *Warmke J.W.*; Ganetzky B.
Department of Physiology, Univ.of Wisconsin-Madison Med.School, Madison,
WI 53706 USA
Neuropharmacology (United Kingdom) , 1996, 35/7 (841-850) CODEN: NEPHB
ISSN: 0028-3908
LANGUAGES: English SUMMARY LANGUAGES: English

7/3/21 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 1996 Elsevier Science B.V. All rts. reserv.

9996826 EMBASE No: 96175488
HERG sequence correction (5)
Trudeau M.C.; *Warmke J.W.*; Ganetzky B.; Robertson G.A.
Department of Physiology, University Wisconsin Medical School, 1300
University Avenue, Madison, WI 53706 USA
Science (USA) , 1996, 272/5265 (1087) CODEN: SCIEA ISSN: 0036-8075
LANGUAGES: English

7/3/22 (Item 1 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)
(c) 1996 BIOSIS. All rts. reserv.

11553259 BIOSIS Number: 98153259
Characterization of the alpha-subunit of the high-conductance
Ca-2+-activated K+ channel from tracheal smooth muscle
Knaus H-G; Eberhart A; Munujos P; Kaczorowski G J; Schmalhofer W A;
Warmke J W; Garcia M L
Inst. Biochem. Pharmacol., Univ. Innsbruck, Innsbruck, Austria
Biophysical Journal 68 (2 PART 2). 1995. A267.
Full Journal Title: 39th Annual Meeting of the Biophysical Society, San
Francisco, California, USA, February 12-16, 1995. Biophysical Journal
ISSN: 0006-3495
Language: ENGLISH
Print Number: Biological Abstracts/RRM Vol. 047 Iss. 004 Ref. 055980

7/3/23 (Item 2 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)
(c) 1996 BIOSIS. All rts. reserv.

11551905 BIOSIS Number: 98151905
H-ERG, a member of the EAG family of K+ channels, encodes an inward
rectifier
Trudeau M C; *Warmke J W*; Ganetzky B; Robertson G A
Dep. Physiol., Univ. Wisconsin, Madison, WI 53706, USA
Biophysical Journal 68 (2 PART 2). 1995. A32.
Full Journal Title: 39th Annual Meeting of the Biophysical Society, San
Francisco, California, USA, February 12-16, 1995. Biophysical Journal
ISSN: 0006-3495
Language: ENGLISH
Print Number: Biological Abstracts/RRM Vol. 047 Iss. 004 Ref. 054626

7/3/24 (Item 3 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)
(c) 1996 BIOSIS. All rts. reserv.

7902431 BIOSIS Number: 40103431
THE DROSOPHILA EAG LOCUS ENCODES A NOVEL TYPE OF POTASSIUM CHANNEL
SUBUNIT
WARMKE J W; DRYSDALE R; GANETZKY B
LAB. GENETICS, UNIV. WISCONSIN, MADISON, WISCONSIN 53706.
THIRTY-FIFTH ANNUAL MEETING OF THE BIOPHYSICAL SOCIETY, SAN FRANCISCO,
CALIFORNIA, USA, FEBRUARY 24-28, 1991. BIOPHYS J 59 (2 PART 2). 1991.

196A. CODEN: BIOJA
Language: ENGLISH
Document Type: CONFERENCE PAPER

7/3/25 (Item 1 from file: 351)
DIALOG(R)File 351:DERWENT WPI
(c)1996 Derwent Info Ltd. All rts. reserv.

010762873 WPI Acc No: 96-259828/26
XRAM Acc No: C96-082320

Co-expression of voltage-activated cation channel alpha and beta
sub-units - esp. para and tip E sub-units of Drosophila voltage
activated sodium channel protein in biologically active form
Patent Assignee: (MERI) MERCK & CO INC; (UYN Y) UNIV NEW YORK STATE
Author (Inventor): ARENA J P; FENG G; HALL L M; LIU K; VAN DER PLOEG L H T;
WANG P; *WARMKE J W*

Patent Family:

CC Number	Kind	Date	Week	
WO 9615220	A1	960523	9626	(Basic)

Priority Data (CC No Date): US 337339 (941110)
Applications (CC,No,Date): WO 95US14378 (951106)

7/3/26 (Item 2 from file: 351)
DIALOG(R)File 351:DERWENT WPI
(c)1996 Derwent Info Ltd. All rts. reserv.

010762608 WPI Acc No: 96-259563/26
XRAM Acc No: C96-082143
XRPX Acc No: N96-218386

Mono-specific antibodies to voltage-activated cation channel - also new
cation channel DNA, useful for identifying channel modulators,
potentially useful partic. as insecticide and neuroprotective agents
Patent Assignee: (MERI) MERCK & CO INC
Author (Inventor): VAN DER PLOEG L H T; *WARMKE J W*
Patent Family:

CC Number	Kind	Date	Week	
WO 9614860	A1	960523	9626	(Basic)
US 5550049	A	960827	9640	

Priority Data (CC No Date): US 338702 (941110)
Applications (CC,No,Date): WO 95US14262 (951106)

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29, 30, 31

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...completed examining records
S13 37 RD (unique items)
?t s13/3/1-37

13/3/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09699827 96221427
Identification and characterization of a Ca(2+)-sensitive nonspecific
cation channel underlying prolonged repetitive firing in Aplysia neurons.
Wilson GF; Richardson FC; Fisher TE; Olivera BM; Kaczmarek LK
Department of Pharmacology, Yale University, New Haven, Connecticut
06510, USA.
J Neurosci (UNITED STATES) Jun 1 1996, 16 (11) p3661-71, ISSN
0270-6474 Journal Code: JDF
Contract/Grant No.: F32 NS08986, NS, NINDS; NS18492, NS, NINDS
Languages: ENGLISH
Document type: JOURNAL ARTICLE

13/3/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09536302 96057902
Modulation of calcium-activated non-selective *cation* *channel*
activity by nitric oxide in rat brown adipose tissue.
Koivisto A; Nedergaard J
Wenner-Gren Institute, Arrhenius Laboratories F3, Stockholm University,
Sweden.
J Physiol (Lond) (ENGLAND) Jul 1 1995, 486 (Pt 1) p59-65, ISSN
0022-3751 Journal Code: JQV
Languages: ENGLISH
Document type: JOURNAL ARTICLE

13/3/3 (Item 3 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09513563 96035163

Tyrosine phosphorylation during synapse formation between identified leech neurons.

Catarsi S; Ching S; Merz DC; Drapeau P

Department of Biology, McGill University, Montreal, Quebec, Canada.

J Physiol (Lond) (ENGLAND) Jun 15 1995, 485 (Pt 3) p775-86, ISSN 0022-3751 Journal Code: JQV

Languages: ENGLISH

Document type: JOURNAL ARTICLE

13/3/4 (Item 4 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09508504 96030104

Signalling synapse formation between identified neurons.

Drapeau P; Catarsi S; Merz DC

Centre for Research in Neuroscience, McGill University, Montreal, Quebec, Canada.

J Physiol Paris (FRANCE) 1995, 89 (3) p115-23, ISSN 0928-4257

Journal Code: BQI

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

13/3/5 (Item 5 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09212123 95142123

Extracellular H+ *modulates* acetylcholine-activated nonselective *cation* *channels* in guinea pig ileum.

Inoue R; Waniishi Y; Ito Y

Department of Pharmacology, Faculty of Medicine, Kyushu University, Fukuoka, Japan.

Am J Physiol (UNITED STATES) Jan 1995, 268 (1 Pt 1) pC162-70, ISSN 0002-9513 Journal Code: 3U8

Languages: ENGLISH

Document type: JOURNAL ARTICLE

13/3/6 (Item 6 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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09134011 95064011

Calcium-calmodulin modulation of the olfactory cyclic nucleotide-gated cation channel [published erratum appears in Science 1994 Dec 23;266(5193):1933]

Liu M; Chen TY; Ahamed B; Li J; Yau KW

Howard Hughes Medical Institute, Baltimore, MD.

Science (UNITED STATES) Nov 25 1994, 266 (5189) p1348-54, ISSN 0036-8075 Journal Code: UJ7

Contract/Grant No.: EY 06837, EY, NEI

Languages: ENGLISH

Document type: JOURNAL ARTICLE

13/3/7 (Item 7 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09099921 95029921

ATP and calcium *modulation* of nonselective *cation* *channels* in IMCD cells.

Ono S; Mougouris T; DuBose TD Jr; Sansom SC

Department of Internal Medicine, University of Texas Medical School at Houston 77225.

Am J Physiol (UNITED STATES) Oct 1994, 267 (4 Pt 2) pF558-65, ISSN 0002-9513 Journal Code: 3U8

Languages: ENGLISH

Document type: JOURNAL ARTICLE

13/3/8 (Item 8 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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09003273 94318273

Opioid inhibition of Ih via adenylyl cyclase.

Ingram SL; Williams JT

Vollum Institute, Oregon Health Sciences University, Portland 97201.

Neuron (UNITED STATES) Jul 1994, 13 (1) p179-86, ISSN 0896-6273

Journal Code: AN8

Contract/Grant No.: NIDA DA00141, DA, NIDA; NIDA DA08163, DA, NIDA; NIDA DA07262, DA, NIDA

Languages: ENGLISH

Document type: JOURNAL ARTICLE

13/3/9 (Item 9 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08980635 94295635

A Na(+)-sensitive *cation* *channel* *modulated* by angiotensin II in cultured intestinal myocytes.

Nouailhetas VL; Aboulafia J; Frediani-Neto E; Ferreira AT; Paiva AC

Department of Biophysics, Escola Paulista de Medicina, Sao Paulo, Brazil.

Am J Physiol (UNITED STATES) Jun 1994, 266 (6 Pt 1) pC1538-43, ISSN 0002-9513 Journal Code: 3U8

Languages: ENGLISH

Document type: JOURNAL ARTICLE

13/3/10 (Item 10 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08919355 94234355

Regulation of cation channels in liver cells by intracellular calcium and protein kinase C.

Fitz JG; Sostman AH; Middleton JP

Department of Medicine, Duke University Medical Center, Durham, North Carolina 27710.

Am J Physiol (UNITED STATES) Apr 1994, 266 (4 Pt 1) pG677-84, ISSN 0002-9513 Journal Code: 3U8

Contract/Grant No.: DK-43278, DK, NIDDK

Languages: ENGLISH

Document type: JOURNAL ARTICLE

13/3/11 (Item 11 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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08778277 94093277

Nonselective *cation* *channels*: physiological and pharmacological *modulations* of channel activity.

Hescheler J; Schultz G

Pharmakologisches Institut, Freie Universitat Berlin, FRG.

EXS (SWITZERLAND) 1993, 66 p27-43, Journal Code: BFZ

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

13/3/12 (Item 12 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08721138 94036138

Activation and *modulation* of calcium-activated non-selective *cation*
channels from embryonic chick sensory neurons.

Razani-Boroujerdi S; Partridge LD

Department of Physiology, University of New Mexico, Albuquerque 87131.

Brain Res (NETHERLANDS) Oct 1 1993, 623 (2) p195-200, ISSN 0006-8993

Journal Code: B5L

Languages: ENGLISH

Document type: JOURNAL ARTICLE

13/3/13 (Item 13 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08676193 93386193

Modulation of mechanosensitive calcium-selective *cation* *channels* by
temperature.

Ding JP; Pickard BG

Biology Department, Washington University, Saint Louis, MO 63130-4899.

Plant J (ENGLAND) May 1993, 3 (5) p713-20, ISSN 0960-7412

Journal Code: BRU

Contract/Grant No.: S07 RR077054-21, RR, NCRR

Languages: ENGLISH

Document type: JOURNAL ARTICLE

13/3/14 (Item 14 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08666784 93376784

Zn2+ potentiates excitatory action of ATP on mammalian neurons.

Li C; Peoples RW; Li Z; Weight FF

Laboratory of Molecular and Cellular Neurobiology, National Institute on
Alcohol Abuse and Alcoholism, National Institutes of Health, Rockville, MD
20852.

Proc Natl Acad Sci U S A (UNITED STATES) Sep 1 1993, 90 (17) p8264-7,
ISSN 0027-8424 Journal Code: PV3

Languages: ENGLISH

Document type: JOURNAL ARTICLE

13/3/15 (Item 15 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08613974 93323974
Mechanosensitive channels transduce osmosensitivity in supraoptic neurons.
Oliet SH; Bourque CW
Centre for Research in Neuroscience, Montreal General Hospital, PQ, Canada.
Nature (ENGLAND) Jul 22 1993, 364 (6435) p341-3, ISSN 0028-0836
Journal Code: NSC
Languages: ENGLISH
Document type: JOURNAL ARTICLE

13/3/16 (Item 16 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08437698 93147698
Complex *modulation* of *cation* *channels* in the tonoplast and plasma membrane of *Saccharomyces cerevisiae*: single-channel studies.
Bertl A; Slayman CL
Department of Cellular and Molecular Physiology, Yale School of Medicine, New Haven, CT 06510.
J Exp Biol (ENGLAND) Nov 1992, 172 p271-87, ISSN 0022-0949
Journal Code: I2F
Languages: ENGLISH
Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

13/3/17 (Item 17 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08062658 92200658
Ontogeny of glycine-enhanced [3H]MK-801 binding to N-methyl-D-aspartate receptor-coupled ion channels.
Boje KM; Skolnick P
Laboratory of Neuroscience, National Institute of Digestive, Diabetes and Kidney Diseases, National Institutes of Health, Bethesda, MD 20892.
Brain Res Dev Brain Res (NETHERLANDS) Jan 17 1992, 65 (1) p51-6, ISSN 0165-3806
Journal Code: DBR
Languages: ENGLISH
Document type: JOURNAL ARTICLE

13/3/18 (Item 18 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08015419 92153419
Loss of extrasynaptic channel modulation by protein kinase C underlies the selection of serotonin responses in an identified leech neuron.
Catarsi S; Drapeau P
Centre for Research in Neuroscience, McGill University, Montreal, Quebec, Canada.
Neuron (UNITED STATES) Feb 1992, 8 (2) p275-81, ISSN 0896-6273
Journal Code: AN8
Languages: ENGLISH
Document type: JOURNAL ARTICLE

13/3/19 (Item 19 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07917304 92055304
Influence of age on N-methyl-D-aspartate antagonist binding sites in the rat brain studied by in vitro autoradiography.
Miyoshi R; Kito S; Doudou N; Nomoto T
Department of Pharmacology, Tokyo Women's Medical College, Japan.
Synapse (UNITED STATES) Jul 1991, 8 (3) p212-7, ISSN 0887-4476
Journal Code: VFL
Languages: ENGLISH
Document type: JOURNAL ARTICLE

13/3/20 (Item 20 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07683285 91202285
Phototransduction: different mechanisms in vertebrates and invertebrates.
Rayer B; Naynert M; Stieve H
Institut fur Biologie II, RWTH Aachen, F.R.G.
J Photochem Photobiol B (SWITZERLAND) Nov 1990, 7 (2-4) p107-48,
ISSN 1011-1344 Journal Code: JLI
Languages: ENGLISH
Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

13/3/21 (Item 21 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07553946 91072946

Influence of age on NMDA receptor complex in rat brain studied by in vitro autoradiography.

Kito S; Miyoshi R; Nomoto T

Division of Health Sciences, University of the Air, Chiba, Japan.

J Histochem Cytochem (UNITED STATES) Dec 1990, 38 (12) p1725-31,

ISSN 0022-1554 Journal Code: IDZ

Languages: ENGLISH

Document type: JOURNAL ARTICLE

13/3/22 (Item 1 from file: 434)

DIALOG(R)File 434:Scisearch(R) Cited Ref Sci

(c) 1996 Inst for Sci Info. All rts. reserv.

14438326 Genuine Article#: TM989 No. References: 1

Title: *MODULATION* OF OLFACTORY CYCLIC NUCLEOTIDE-GATED *CATION* *CHANNEL*
BY CALCIUM-CALMODULIN

Author(s): YAU KW; CHEN TY; LIU M

Corporate Source: HOWARD HUGHES MED INST/BALTIMORE//MD/21205; JOHNS HOPKINS
UNIV,SCH MED/BALTIMORE//MD/21205

Journal: CHEMICAL SENSES, 1995, V20, N6 (DEC), P335

ISSN: 0379-864X

Language: ENGLISH Document Type: MEETING ABSTRACT

13/3/23 (Item 2 from file: 434)

DIALOG(R)File 434:Scisearch(R) Cited Ref Sci

(c) 1996 Inst for Sci Info. All rts. reserv.

13740711 Genuine Article#: QL995 No. References: 44

Title: ATRIAL-NATRIURETIC-PEPTIDE MODULATES SODIUM AND POTASSIUM-ACTIVATED
ADENOSINE-TRIPHOSPHATASE THROUGH A MECHANISM INVOLVING CYCLIC-GMP AND
CYCLIC GMP-DEPENDENT PROTEIN-KINASE

Author(s): SCAVONE C; SCANLON C; MCKEE M; NATHANSON JA

Corporate Source: MASSACHUSETTS GEN HOSP E,NEUROPHARMACOL RES LAB/CNY6,149
13TH ST/BOSTON//MA/02129; HARVARD UNIV,SCH MED,DEPT
NEUROL/BOSTON//MA/02115; MASSACHUSETTS GEN HOSP,NEUROPHARMACOL RES
LAB/BOSTON//MA/02114

Journal: JOURNAL OF PHARMACOLOGY AND EXPERIMENTAL THERAPEUTICS, 1995, V272
, N3 (MAR), P1036-1043

ISSN: 0022-3565

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

13/3/24 (Item 3 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

13738626 Genuine Article#: QL987 No. References: 0
Title: CHARACTERIZATION OF HORMONE-*MODULATED* NONSELECTIVE *CATION*
CHANNELS IN RAT ADRENAL-ZONE GLOMERULOSA CELLS
Author(s): LI F; LOTSHAW DP
Corporate Source: NO ILLINOIS UNIV,DEPT BIOL SCI/DE KALB//IL/60115
Journal: FASEB JOURNAL, 1995, V9, N3 (MAR 9), PA388
ISSN: 0892-6638
Language: ENGLISH Document Type: MEETING ABSTRACT

13/3/25 (Item 4 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

13208717 Genuine Article#: NZ247 No. References: 58
Title: OPIOID INHIBITION OF I-H VIA ADENYLYL-CYCLASE
Author(s): INGRAM SL; WILLIAMS JT
Corporate Source: OREGON HLTH SCI UNIV,VOLLUM INST/PORTLAND//OR/97201;
OREGON HLTH SCI UNIV,DEPT PHARMACOL/PORTLAND//OR/97201
Journal: NEURON, 1994, V13, N1 (JUL), P179-186
ISSN: 0896-6273
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

13/3/26 (Item 5 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

12935443 Genuine Article#: ND196 No. References: 0
Title: ATP AND CA2+ *MODULATION* OF MECHANOSENSITIVE NONSELECTIVE *CATION*
CHANNELS OF IMCD CELLS
Author(s): SANSOM SC; ONO S; MOUGOURIS T; DUBOSE T
Corporate Source: UNIV TEXAS,DEPT PHYSIOL & CELL BIOL,DIV
NEPHROL/HOUSTON//TX/77030
Journal: FASEB JOURNAL, 1994, V8, N4 (MAR), PA295
ISSN: 0892-6638
Language: ENGLISH Document Type: MEETING ABSTRACT

13/3/27 (Item 6 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci

(c) 1996 Inst for Sci Info. All rts. reserv.

12319641 Genuine Article#: LB641 No. References: 32
Title: SINGLE-CHANNEL STUDY OF THE CYCLIC AMP-REGULATED CHLORIDE CURRENT IN
 GUINEA-PIG VENTRICULAR MYOCYTES
Author(s): EHARA T; MATSUURA H
Corporate Source: SAGA MED SCH, DEPT PHYSIOL, NABESHIMA 5-1-1/SAGA
 849//JAPAN/
Journal: JOURNAL OF PHYSIOLOGY-LONDON, 1993, V464, MAY (MAY), P307-320
ISSN: 0022-3751
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

13/3/28 (Item 7 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

11354251 Genuine Article#: HC441 No. References: 48
Title: ONTOGENY OF GLYCINE-ENHANCED (H-3)MK-801 BINDING TO
 N-METHYL-D-ASPARTATE RECEPTOR-COUPLED ION CHANNELS
Author(s): BOJE KM; SKOLNICK P
Corporate Source: NIADDKD, NEUROSCI LAB, BLD 8, ROOM 111/BETHESDA//MD/20892
Journal: DEVELOPMENTAL BRAIN RESEARCH, 1992, V65, N1 (JAN 17), P51-56
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

13/3/29 (Item 8 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

10548214 Genuine Article#: EL530 No. References: 0
Title: PATHWAYS THAT *MODULATE* CALCIUM-ACTIVATED *CATION* *CHANNELS* IN
 NEURONS
Author(s): SWANDULLA D; PARTRIDGE LD; MULLER T
Corporate Source: MAX PLANCK INST BIOPHYS CHEM/D-3400 GOTTINGEN//FED REP
 GER/
Journal: BIOLOGICAL CHEMISTRY HOPPE-SEYLER, 1990, V371, N11, P1044
Language: ENGLISH Document Type: MEETING ABSTRACT

13/3/30 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 1996 Elsevier Science B.V. All rts. reserv.

7279428 EMBASE No: 88161281
(3H)glycine binding is modulated by Mg²⁺ and other ligands of the NMDA
receptor-cation channel complex

Marvizon J.C.G.; Skolnick P.
Laboratory of Neuroscience, NIDDK, National Institutes of Health,
Bethesda, MD 20892 USA
EUR. J. PHARMACOL. (Netherlands) , 1988, 151/1 (157-158) CODEN: EJPHA
ISSN: 0014-2999
LANGUAGES: English

13/3/31 (Item 1 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)
(c) 1996 BIOSIS. All rts. reserv.

11429331 BIOSIS Number: 98029331
Calcium-calmodulin *modulation* of cyclic nucleotide-gated *cation*
channel of olfactory receptor cells
Yau K-W; Chen T-Y; Liu M Y
Howard Hughes Med. Inst., Baltimore, MD 21205, USA
Chemical Senses 19 (5). 1994. 576.
Full Journal Title: Sixteenth Annual Meeting of the Association for
Chemoreception Sciences, Sarasota, Florida, USA, April 1994. Chemical
Senses
ISSN: 0379-864X
Language: ENGLISH
Document Type: CONFERENCE PAPER
Print Number: Biological Abstracts/RRM Vol. 047 Iss. 001 Ref. 016837

13/3/32 (Item 2 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)
(c) 1996 BIOSIS. All rts. reserv.

10515001 BIOSIS Number: 96115001
ZINC POTENTIATES EXCITATORY ACTION OF ATP ON MAMMALIAN NEURONS
LI C; PEOPLES R W; LI Z; WEIGHT F F
LAB. MOLECULAR CELLULAR NEUROBIOL., NATIONAL INST. ALCOHOL ABUSE
ALCOHOLISM, NATIONAL INST. HEALTH, 12501 WASHINGTON AVE., ROCKVILLE, MD
20852, USA.
PROC NATL ACAD SCI U S A 90 (17). 1993. 8264-8267. CODEN: PNASA
Full Journal Title: Proceedings of the National Academy of Sciences of
the United States of America
Language: ENGLISH

13/3/33 (Item 3 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)
(c) 1996 BIOSIS. All rts. reserv.

10327485 BIOSIS Number: 45127485

ATP AND CALCIUM *MODULATED* A NON-SELECTIVE *CATION* *CHANNEL* IN M-1
MOUSE-CCD CELLS

KORBMACHER C; VOLK T; SEGAL A S; BOULPAEP E L; FROEMTER E
Z. PHYSIOL., J. W. GOETHE-UNIV., FRANKFURT AM MAIN, GER.

26TH ANNUAL MEETING OF THE ASN (AMERICAN SOCIETY OF NEPHROLOGY), BOSTON,
MASSACHUSETTS, USA, NOVEMBER 14-17, 1993. J AM SOC NEPHROL 4 (3). 1993.

870. CODEN: JASNE

Language: ENGLISH

Document Type: CONFERENCE PAPER

13/3/34 (Item 4 from file: 5)

DIALOG(R)File 5:BIOSIS PREVIEWS(R)

(c) 1996 BIOSIS. All rts. reserv.

9801063 BIOSIS Number: 44051063

MODULATION OF AN APLYSIA DIVALENT-PERMEABLE *CATION* *CHANNEL* BY
ENDOGENOUS KINASE AND THE CATALYTIC SUBUNIT OF PROTEIN KINASE A

WILSON G F; KACZMAREK L K

DEP. PHARMACOL., YALE UNIV. SCH. MED., NEW HAVEN, CONN. 06510.

22ND ANNUAL MEETING OF THE SOCIETY FOR NEUROSCIENCE, ANAHEIM, CALIFORNIA,
USA, OCTOBER 25-30, 1992. SOC NEUROSCI ABSTR 18 (1-2). 1992. 586.

CODEN: ASNEE

Language: ENGLISH

Document Type: CONFERENCE PAPER

13/3/35 (Item 5 from file: 5)

DIALOG(R)File 5:BIOSIS PREVIEWS(R)

(c) 1996 BIOSIS. All rts. reserv.

9783210 BIOSIS Number: 44033210

PROTONS ENHANCE THE CAPSAICIN EVOKED INWARD CURRENT IN DORSAL ROOT
GANGLION CELLS

PETERSEN M; LAMOTTE R H

DEP. ANESTHESIOLOGY, YALE UNIV. SCH. MED., NEW HAVEN, CONN. 06510.

22ND ANNUAL MEETING OF THE SOCIETY FOR NEUROSCIENCE, ANAHEIM, CALIFORNIA,
USA, OCTOBER 25-30, 1992. SOC NEUROSCI ABSTR 18 (1-2). 1992. 130.

CODEN: ASNEE

Language: ENGLISH

Document Type: CONFERENCE PAPER

13/3/36 (Item 6 from file: 5)

DIALOG(R)File 5:BIOSIS PREVIEWS(R)

(c) 1996 BIOSIS. All rts. reserv.

9106274 BIOSIS Number: 93091274
ONTOGENY OF GLYCINE-ENHANCED TRITIATED MK-801 BINDING TO N
METHYL-D-ASPARTATE RECEPTOR-COUPLED ION CHANNELS
BOJE K M; SKOLNICK P
BUILD. 8, ROOM 111, NIH, BETHESDA, MD. 20892.
DEV BRAIN RES 65 (1). 1992. 51-56. CODEN: DBRRD
Full Journal Title: Developmental Brain Research
Language: ENGLISH

13/3/37 (Item 1 from file: 351)
DIALOG(R)File 351:DERWENT WPI
(c)1996 Derwent Info Ltd. All rts. reserv.

010762608 WPI Acc No: 96-259563/26
XRAM Acc No: C96-082143
XRPX Acc No: N96-218386

Mono-specific antibodies to voltage-activated cation channel - also new
cation *channel* DNA, useful for identifying channel *modulators*,
potentially useful partic. as insecticide and neuroprotective agents
Patent Assignee: (MERI) MERCK & CO INC
Author (Inventor): VAN DER PLOEG L H T; WARMKE J W
Patent Family:

CC Number	Kind	Date	Week	
WO 9614860	A1	960523	9626	(Basic)
US 5550049	A	960827	9640	

Priority Data (CC No Date): US 338702 (941110)
Applications (CC,No,Date): WO 95US14262 (951106)
?

L18 21 L17 NOT L9
=> t cit 1-21

1. 5,576,435, Nov. 19, 1996, Process and intermediates for the preparation of excitatory amino acid receptor antagonists; Anita Melikian-Badalian, et al., 546/150, 141, 145, 146, 147 [IMAGE AVAILABLE]
2. 5,565,452, Oct. 15, 1996, 9-amino-pyridazino[4',5':3,4]pyrrolo-[2,1-A]isoquinolines and the use thereof for the production of pharmaceutical preparations; Dietrich Arndts, et al., 514/248 [IMAGE AVAILABLE]
3. 5,552,382, Sep. 3, 1996, Gramicidin as a spermicide against sexual transmission of HIV; Aldar S. Bourinbaiar, 514/14 [IMAGE AVAILABLE]
4. 5,527,810, Jun. 18, 1996, Decahydroisoquinoline compounds as excitatory amino acid receptor antagonists; Paul L. Ornstein, 514/307; 546/144, 147 [IMAGE AVAILABLE]
5. 5,514,680, May 7, 1996, Glycine receptor antagonists and the use thereof; Eckard Weber, et al., 514/249 [IMAGE AVAILABLE]
6. 5,505,922, Apr. 9, 1996, Anesthetic pharmaceutical combination; Paul D. Thut, et al., 424/677, 715, 722; 514/818 [IMAGE AVAILABLE]
7. 5,491,241, Feb. 13, 1996, Bicyclic intermediates for excitatory amino acid receptor antagonists; James A. Monn, 548/452, 251, 253 [IMAGE AVAILABLE]
8. 5,486,620, Jan. 23, 1996, Intermediates for the synthesis of kainic acid; James A. Monn, 548/515 [IMAGE AVAILABLE]
9. 5,486,519, Jan. 23, 1996, Method for treatment of acute renal failure; James E. Greenwald, 514/258 [IMAGE AVAILABLE]
10. 5,475,007, Dec. 12, 1995, 1,2,3,4-tetrahydroquinoline-2,3,4-trione-3 or 4-oximes and the use thereof; Sui X. Cai, et al., 514/312, 63, 235.2, 248, 249, 253, 258, 259, 261, 307; 546/155 [IMAGE AVAILABLE]
11. 5,470,978, Nov. 28, 1995, Process and intermediates for the preparation of excitatory amino acid receptor antagonists; Anita Melikian-Badalian, et al., 546/141, 14, 142 [IMAGE AVAILABLE]
12. 5,446,051, Aug. 29, 1995, Aryl-spaced decahydroisoquinoline-3-carboxylic acids as excitatory amino acid receptor antagonists; Paul L. Ornstein, 514/307; 546/22, 147 [IMAGE AVAILABLE]

13. 5,399,696, Mar. 21, 1995, Isoquinolinyl compounds which are intermediates; M. Brian Arnold, et al., 546/147 [IMAGE AVAILABLE]
14. 5,356,902, Oct. 18, 1994, Decahydroisoquinoline compounds as excitatory amino acid receptor antagonists; Paul L. Ornstein, 514/307; 546/144, 147 [IMAGE AVAILABLE]
15. 5,352,799, Oct. 4, 1994, Intermediate compounds useful in the synthesis of kainic acid; James A. Monn, 548/515; 546/276.7; 548/312.1, 465 [IMAGE AVAILABLE]
16. 5,338,851, Aug. 16, 1994, Synthesis of cis-decahydroisoquinoline-3-carboxylic acids; Bret E. Huff, et al., 546/141, 145, 147, 150 [IMAGE AVAILABLE]
17. 5,319,095, Jun. 7, 1994, Synthesis of kainic acid; James A. Monn, 548/421, 515 [IMAGE AVAILABLE]
18. 5,284,957, Feb. 8, 1994, Excitatory amino acid receptor antagonists; Bret Huff, 548/112, 110 [IMAGE AVAILABLE]
19. 5,208,145, May 4, 1993, Assay for the presence, in cultured cells, of functional ligand-gated channels, and substances which ****enhance**** intracellular lithium accumulation by cultured cells via such channels; Scott W. Rogers, 435/6, 20, 29; 436/501, 504 [IMAGE AVAILABLE]
20. 5,196,421, Mar. 23, 1993, Excitatory amino acid receptor antagonists in methods for the use thereof; Loretta A. McQuaid, et al., 514/250 [IMAGE AVAILABLE]
21. 5,153,196, Oct. 6, 1992, Excitatory amino acid receptor antagonists and methods for the use thereof; Loretta A. McQuaid, et al., 514/250 [IMAGE AVAILABLE]

=>

L1 1 S E10
L2 0 S WARMKE, JEFFREY/IN
L3 0 S VOLTAGE-ACTIVATED CATION CHANNEL
L4 1 S VOLTAGE-ACTIVATED CATION CHANNELS
L5 60 S CATION CHANNEL?
L6 123490 S MODULAT?
L7 224898 S INHIBIT?
L8 346870 S ENHANC?
L9 31 S L5 AND L6
L10 1 S 5493027/PN
L11 1 S ROGAWSKI AND L10
L12 1 S PHARMACOL. AND L10
L13 45 S L7 AND L5
L14 137054 S HIS
L15 20 S L13 NOT L9
=> s l8 and l6
L16 28205 L8 AND L6
=> s l8 and l5
L17 43 L8 AND L5
=> s l17 not l9
L18 21 L17 NOT L9
=> t cit 1-21

=> s 113 not 19

L15 20 L13 NOT L9

=> t cit 1-20

1. 5,565,452, Oct. 15, 1996, 9-amino-pyridazino[4',5':3,4]pyrrolo-[2,1-A]isoquinolines and the use thereof for the production of pharmaceutical preparations; Dietrich Arndts, et al., 514/248 [IMAGE AVAILABLE]

2. 5,552,382, Sep. 3, 1996, Gramicidin as a spermicide against sexual transmission of HIV; Aldar S. Bourinbaiar, 514/14 [IMAGE AVAILABLE]

3. 5,527,810, Jun. 18, 1996, Decahydroisoquinoline compounds as excitatory amino acid receptor antagonists; Paul L. Ornstein, 514/307; 546/144, 147 [IMAGE AVAILABLE]

4. 5,514,680, May 7, 1996, Glycine receptor antagonists and the use thereof; Eckard Weber, et al., 514/249 [IMAGE AVAILABLE]

5. 5,505,922, Apr. 9, 1996, Anesthetic pharmaceutical combination; Paul D. Thut, et al., 424/677, 715, 722; 514/818 [IMAGE AVAILABLE]

6. 5,491,241, Feb. 13, 1996, Bicyclic intermediates for excitatory amino acid receptor antagonists; James A. Monn, 548/452, 251, 253 [IMAGE AVAILABLE]

7. 5,486,519, Jan. 23, 1996, Method for treatment of acute renal failure; James E. Greenwald, 514/258 [IMAGE AVAILABLE]

8. 5,475,007, Dec. 12, 1995, 1,2,3,4-tetrahydroquinoline-2,3,4-trione-3 or 4-oximes and the use thereof; Sui X. Cai, et al., 514/312, 63, 235.2, 248, 249, 253, 258, 259, 261, 307; 546/155 [IMAGE AVAILABLE]

9. 5,447,520, Sep. 5, 1995, Real time stabilizing system for pulsating activity; Mark L. Spano, et al., 607/5; 128/705 [IMAGE AVAILABLE]

10. 5,446,051, Aug. 29, 1995, Aryl-spaced decahydroisoquinoline-3-carboxylic acids as excitatory amino acid receptor antagonists; Paul L. Ornstein, 514/307; 546/22, 147 [IMAGE AVAILABLE]

11. 5,438,130, Aug. 1, 1995, Fucosylated guanosine disulfates as excitatory amino acid antagonists; Stanley Goldin, et al., 536/27.81, 26.3, 26.7 [IMAGE AVAILABLE]

12. 5,399,696, Mar. 21, 1995, Isoquinolinyl compounds which are intermediates; M. Brian Arnold, et al., 546/147 [IMAGE AVAILABLE]

13. 5,356,902, Oct. 18, 1994, Decahydroisoquinoline compounds as excitatory amino acid receptor antagonists; Paul L. Ornstein, 514/307; 546/144, 147 [IMAGE AVAILABLE]

14. 5,342,401, Aug. 30, 1994, Real time cardiac arrhythmia stabilizing system; Mark L. Spano, et al., 607/5, 9, 17 [IMAGE AVAILABLE]

15. 5,284,957, Feb. 8, 1994, Excitatory amino acid receptor antagonists; Bret Huff, 548/112, 110 [IMAGE AVAILABLE]

16. 5,232,684, Aug. 3, 1993, Labelled resiniferatoxin, compositions thereof, and methods for using the same; Peter M. Blumberg, et al., 424/1.81, 1.45, 1.85, 9.6; 436/503, 504; 549/348 [IMAGE AVAILABLE]

17. 5,208,145, May 4, 1993, Assay for the presence, in cultured cells, of functional ligand-gated channels, and substances which enhance intracellular lithium accumulation by cultured cells via such channels; Scott W. Rogers, 435/6, 20, 29; 436/501, 504 [IMAGE AVAILABLE]

18. 5,196,421, Mar. 23, 1993, Excitatory amino acid receptor antagonists in methods for the use thereof; Loretta A. McQuaid, et al., 514/250 [IMAGE AVAILABLE]

19. 5,153,196, Oct. 6, 1992, Excitatory amino acid receptor antagonists and methods for the use thereof; Loretta A. McQuaid, et al., 514/250 [IMAGE AVAILABLE]

20. 5,021,450, Jun. 4, 1991, New class of compounds having a variable spectrum of activities for capsaicin-like responses, compositions and uses thereof; Peter M. Blumberg, 514/453, 691; 549/381, 382; 560/75 [IMAGE AVAILABLE]

=> t cit ab 6

6. 5,491,241, Feb. 13, 1996, Bicyclic intermediates for excitatory amino acid receptor antagonists; James A. Monn, 548/452, 251, 253 [IMAGE AVAILABLE]

US PAT NO: 5,491,241 [IMAGE AVAILABLE]

L15: 6 of 20

ABSTRACT:

This invention provides novel bicyclic compounds which are useful as excitatory amino acid receptor antagonists and in the treatment of neurological disorders. This invention also provides intermediates useful in the synthesis of excitatory amino acid antagonists.

=> d his

(FILE 'USPAT' ENTERED AT 13:32:35 ON 12 DEC 96)

E VAN DER PLOEG/IN

Set	Items	Description
S1	285	E3-E9
S2	14	VOLTAGE (W) ACTIVATED (W) CATION (W) CHANNEL?
S3	2601	CATION CHANNEL?
S4	6276	CATION (W) CHANNEL?
S5	2	S1 AND S4
S6	58	E3-E7
S7	26	RD (unique items)
S8	0	S7 AND S3
S9	529699	MODULAT?
S10	115	L9 AND L4
S11	1054	S9 AND S4
S12	90	S9 (5N) S4
S13	37	RD (unique items)
S14	2690057	INHIBIT?
S15	1029834	ENHANC?
S16	2232	S4 AND S14
S17	241	S4 (5N) S14
S18	135	S4 (2N) S14
S19	58	RD (unique items)
S20	2	S2 AND S9

?s s2 and s14

14 S2
2690057 S14
S21 4 S2 AND S14
?s s21 not s20

4 S21
2 S20
S22 4 S21 NOT S20
?t s22/3, ab/1-4

22/3,AB/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07578787 91097787

Mapping the receptor site for charybdotoxin, a pore-blocking potassium channel *inhibitor*.

MacKinnon R; Heginbotham L; Abramson T

Department of Cellular and Molecular Physiology, Harvard Medical School, Boston, Massachusetts 02115.

Neuron (UNITED STATES) Dec 1990, 5 (6) p767-71, ISSN 0896-6273
Journal Code: AN8

Contract/Grant No.: GM43949, GM, NIGMS

Languages: ENGLISH

Document type: JOURNAL ARTICLE

The Shaker K⁺ channel belongs to a family of structurally related *voltage*-activated* cation* channels* that play a central role in cellular electrical signaling. By studying multiple site-directed mutants of the Shaker K⁺ channel, a region that forms the binding site for a pore-blocking scorpion toxin has been identified. The region contains a sequence that is highly conserved among cloned K⁺ channels and may contribute to the formation of the ion conduction pore.

22/3,AB/2 (Item 2 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07185129 90092129

Identification of P2Y purinoceptors associated with *voltage*-activated* cation* channels* in cardiac ventricular myocytes of the rat.

Bjornsson OG; Monck JR; Williamson JR

Department of Biochemistry & Biophysics, University of Pennsylvania, Philadelphia 19104-6089.

Eur J Biochem (GERMANY, WEST) Dec 8 1989, 186 (1-2) p395-404, ISSN 0014-2956 Journal Code: EMZ

Contract/Grant No.: HL-14461

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Extracellular ATP has vasodilatory and inotropic effects in the heart. We have demonstrated that extracellular ATP, in a concentration-dependent manner (10 nM-0.1 mM), increased [Ca²⁺]_i in suspensions of isolated fura-2-loaded rat cardiac ventricular myocytes (maximum 96 +/- 10% increase over basal levels, SEM, n = 12, P less than 0.01). The increase in [Ca²⁺]_i was often biphasic, with an initial fast phase (less than 1 s) of low amplitude, followed by a slower phase of higher amplitude. A second application of ATP had little effect, and ATP abolished the effect of subsequent electrical stimulations, even though the cells were still able to respond with an increase in [Ca²⁺]_i to KCl-induced depolarization or stimulation by caffeine. Pretreatment of cells with nifedipine, verapamil, caffeine, ryanodine, or 8-(N,N-diethylamino)octyl 3,4,5-trimethoxybenzoate hydrochloride attenuated the effect of extracellular ATP on [Ca²⁺]_i, and binding of extracellular free calcium by excess EGTA completely abolished the effects of extracellular ATP and electrical stimulation. Extracellular ATP increased bisoxonol fluorescence in ventricular myocytes, indicating depolarization of the sarcolemma. Pretreatment of the myocytes with tetrodotoxin (50 micromM), or replacement of NaCl in the incubation buffer with the impermeant cation N-methyl-D-glucamine, suppressed the extracellular ATP effect on [Ca²⁺]_i. ADP and AMP had smaller effects on

[Ca²⁺]_i than ATP; adenosine had no effect. ATP analogues showed the following rank order of potency in increasing [Ca²⁺]_i or bisoxonol fluorescence: ATP greater than or equal to 2-methylthioATP much greater than adenosine 5'-O-[3-thio]triphosphate greater than adenosine 5'-[alpha, beta-methylene]triphosphate approximately adenosine 5'-[beta, gamma-methylene]triphosphate approximately adenosine 5'-[beta, gamma-imino]triphosphate greater than adenosine. These data are consistent with the presence of purinoceptors (P2Y subtype) on the sarcolemma of cardiac ventricular myocytes of the rat, which upon activation lead to depolarization and activation of cation channels of the sarcolemma and flux of extracellular Ca²⁺ into the cells. This may result in further flux of Ca²⁺ into the cytosol from intracellular stores. The effects of extracellular ATP on [Ca²⁺]_i in rat cardiac ventricular myocytes may, in part, explain the direct inotropic effects of extracellular ATP on the mammalian heart.

22/3,AB/3 (Item 1 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

10584415 Genuine Article#: EQ381 Number of References: 26
Title: MAPPING THE RECEPTOR-SITE FOR CHARYBDOTOXIN, A PORE-BLOCKING POTASSIUM CHANNEL *INHIBITOR*
Author(s): MACKINNON R; HEGINBOTHAM L; ABRAMSON T
Corporate Source: HARVARD UNIV,SCH MED,DEPT CELLULAR & MOLEC PHYSIOL/BOSTON//MA/02115; HARVARD UNIV,SCH MED,PROGRAM NEUROSCI/BOSTON//MA/02115
Journal: NEURON, 1990, V5, N6, P767-771
Language: ENGLISH Document Type: ARTICLE
Abstract: The Shaker K⁺ channel belongs to a family of structurally related *voltage*-activated *cation* channels that play a central role in cellular electrical signaling. By studying multiple site-directed mutants of the Shaker K⁺ channel, a region that forms the binding site for a pore-blocking scorpion toxin has been identified. The region contains a sequence that is highly conserved among cloned K⁺ channels and may contribute to the formation of the ion conduction pore.

22/3,AB/4 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 1996 Elsevier Science B.V. All rts. reserv.

8029881 EMBASE No: 91059085
Mapping the receptor site for charybdotoxin, a pore-blocking potassium channel *inhibitor*
MacKinnon R.; Heginbotham L.; Abramson T.

Department of Cellular and Molecular Physiology, Harvard Medical School,
Boston, MA 02115 USA

NEURON (USA) , 1990, 5/6 (767-771) CODEN: NERNE ISSN: 0896-6273

LANGUAGES: English

The Shaker K⁺ channel belongs to a family of structurally related *voltage*-activated* cation* channels* that play a central role in cellular electrical signaling. By studying multiple site-directed mutants of the Shaker K⁺ channel, a region that forms the binding site for a pore-blocking scorpion toxin has been identified. The region contains a sequence that is highly conserved among cloned K⁺ channels and may contribute to the formation of the ion conduction pore.

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contribute to the formation of the ion conduction pore.
 ?ds

Set	Items	Description
S1	285	E3-E9
S2	14	VOLTAGE (W) ACTIVATED (W) CATION (W) CHANNEL?
S3	2601	CATION CHANNEL?
S4	6276	CATION (W) CHANNEL?
S5	2	S1 AND S4
S6	58	E3-E7
S7	26	RD (unique items)
S8	0	S7 AND S3
S9	529699	MODULAT?
S10	115	L9 AND L4
S11	1054	S9 AND S4
S12	90	S9 (5N) S4
S13	37	RD (unique items)
S14	2690057	INHIBIT?
S15	1029834	ENHANC?
S16	2232	S4 AND S14
S17	241	S4 (5N) S14
S18	135	S4 (2N) S14
S19	58	RD (unique items)
S20	2	S2 AND S9
S21	4	S2 AND S14
S22	4	S21 NOT S20
?s s2 and s15		

	14	S2
	1029834	S15
S23	0	S2 AND S15

?

12/3/1 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09203045 95133045

Platelet intracellular calcium is not modified by subcutaneous administration of erythropoietin [letter]

Lo Cascio C; Guzzo P; Loschiavo C; Manzato F; Lechi C

Thromb Haemost (GERMANY) Aug 1994, 72 (2) p326-7, ISSN 0340-6245

Journal Code: VQ7

Languages: ENGLISH

Document type: LETTER

12/3/2 (Item 2 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09151161 95081161

2',3'-Dialdehyde GTP as an irreversible G protein antagonist. Disruption and reconstitution of G protein-mediated signal transduction in cells and cell membranes.

Nanoff C; Boehm S; Hohenegger M; Schutz W; Freissmuth M

Institute of Pharmacology, Vienna University, Austria.

J Biol Chem (UNITED STATES) Dec 16 1994, 269 (50) p31999-2007, ISSN

0021-9258 Journal Code: HIV

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/3 (Item 3 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09138440 95068440

IL-1 inhibits beta-adrenergic control of cardiac calcium current: role of L-arginine/nitric oxide pathway.

Rozanski GJ; Witt RC

Department of Physiology, University of Nebraska College of Medicine, Omaha 68198-4575.

Am J Physiol (UNITED STATES) Nov 1994, 267 (5 Pt 2) p1753-8, ISSN

0002-9513 Journal Code: 3U8

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/4 (Item 4 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09129454 95059454

Structural determinants of the blockade of N-type calcium channels by a peptide neurotoxin.

Ellinor PT; Zhang JF; Horne WA; Tsien RW

Department of Molecular and Cellular Physiology, Stanford University Medical Center, California 94305.

Nature (ENGLAND) Nov 17 1994, 372 (6503) p272-5, ISSN 0028-0836

Journal Code: NSC

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/5 (Item 5 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09115395 95045395

Voltage-dependent facilitation of a neuronal alpha 1C L-type calcium channel.

Bourinet E; Charnet P; Tomlinson WJ; Stea A; Snutch TP; Nargeot J

Biotechnology Laboratory, University of British Columbia, Vancouver, Canada.

EMBO J (ENGLAND) Nov 1 1994, 13 (21) p5032-9, ISSN 0261-4189

Journal Code: EMB

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/6 (Item 6 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09103920 95033920

A new splice variant of the inositol-1,4,5-triphosphate (IP3) receptor.

Iida N; Bourguignon LY

Department of Cell Biology and Anatomy, School of Medicine, University of Miami, FL 33101.

Cell Signal (ENGLAND) May 1994, 6 (4) p449-55, ISSN 0898-6568

Journal Code: AVB

Contract/Grant No.: GM 36353, GM, NIGMS

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/7 (Item 7 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09099955 95029955

Interleukin-1 enhances beta-responsiveness of cardiac L-type calcium current suppressed by acidosis.

Rozanski GJ; Witt RC

Department of Physiology, University of Nebraska College of Medicine, Omaha 68189-4575.

Am J Physiol (UNITED STATES) Oct 1994, 267 (4 Pt 2) pH1361-7, ISSN 0002-9513 Journal Code: 3U8

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/8 (Item 8 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09048503 94363503

PDGF-BB, but not PDGF-AA, stimulates calcium mobilization, activation of calcium channels and cell proliferation in cultured rat mesangial cells.

Wallmon A; Fellstrom B; Larsson R; Floege J; Topley N; Ljunghall S

Department of Internal Medicine, University Hospital, Uppsala, Sweden.

Exp Nephrol (SWITZERLAND) Jul-Aug 1993, 1 (4) p238-44, ISSN 1018-7782 Journal Code: B4L

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/9 (Item 9 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09040577 94355577

Ca(2+)-dependent inactivation of a cloned cardiac Ca²⁺ channel alpha 1 subunit (alpha 1C) expressed in Xenopus oocytes.

Neely A; Olcese R; Wei X; Birnbaumer L; Stefani E

Department of Molecular Physiology and Biophysics, Baylor College of Medicine, Houston, Texas 77030.

Biophys J (UNITED STATES) Jun 1994, 66 (6) p1895-903, ISSN 0006-3495 Journal Code: A5S

Contract/Grant No.: AR38970, AR, NIAMS; HL37044, HL, NHLBI

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/10 (Item 10 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09035992 94350992

Structure and functional characterization of neuronal alpha 1E calcium channel subtypes.

Williams ME; Marubio LM; Deal CR; Hans M; Brust PF; Philipson LH; Miller RJ; Johnson EC; Harpold MM; Ellis SB

SIBIA, Inc., La Jolla, California 92037.

J Biol Chem (UNITED STATES) Sep 2 1994, 269 (35) p22347-57, ISSN 0021-9258 Journal Code: HIV

Contract/Grant No.: DA-02121, DA, NIDA; MH-40165, MH, NIMH; DK-42086, DK, NIDDK

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/11 (Item 11 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09023703 94338703

Ca²⁺ channel regulation by a conserved beta subunit domain.

De Waard M; Pragnell M; Campbell KP

Howard Hughes Medical Institute, Department of Physiology and Biophysics, University of Iowa College of Medicine, Iowa City 52242.

Neuron (UNITED STATES) Aug 1994, 13 (2) p495-503, ISSN 0896-6273
Journal Code: AN8

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/12 (Item 12 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

09010271 94325271

Identification and characterization of three calmodulin binding sites of the skeletal muscle ryanodine receptor.

Menegazzi P; Larini F; Treves S; Guerrini R; Quadroni M; Zorzato F

Istituto di Patologia Generale, Universita degli Studi di Ferrara, Italy.

Biochemistry (UNITED STATES) Aug 9 1994, 33 (31) p9078-84, ISSN 0006-2960 Journal Code: A0G

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/13 (Item 13 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08994793 94309793

Omega-conotoxin MVIIC reversibly inhibits a human N-type calcium channel
and calcium influx into chick synaptosomes.

Grantham CJ; Bowman D; Bath CP; Bell DC; Bleakman D
Lilly Research Centre Ltd, Windlesham, Surrey, U.K.

Neuropharmacology (ENGLAND) Feb 1994, 33 (2) p255-8, ISSN 0028-3908

Journal Code: NZB

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/14 (Item 14 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08981378 94296378

Molecular determinants of calcium-dependent inactivation in cardiac
L-type calcium channels.

Zong S; Zhou J; Tanabe T

Howard Hughes Medical Institute, Yale University School of Medicine, New
Haven, Connecticut 06536-0812.

Biochem Biophys Res Commun (UNITED STATES) Jun 30 1994, 201 (3)
p1117-23, ISSN 0006-291X Journal Code: 9Y8

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/15 (Item 15 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08922289 94237289

Calcium currents recorded from a neuronal alpha 1C L-type calcium channel
in Xenopus oocytes.

Charnet P; Bourinet E; Dubel SJ; Snutch TP; Nargeot J
CRBM-CNRS UPR 9008, INSERM U249, Montpellier, France.

FEBS Lett (NETHERLANDS) May 9 1994, 344 (1) p87-90, ISSN 0014-5793

Journal Code: EUH

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/16 (Item 16 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08887213 94202213

Structural and electrophysiological analysis of annexin V mutants. Mutagenesis of human annexin V, an in vitro voltage-gated calcium channel, provides information about the structural features of the ion pathway, the voltage sensor and the ion selectivity filter.

Burger A; Voges D; Demange P; Perez CR; Huber R; Berendes R
Max-Planck-Institut fur Biochemie, Martinsried, Germany.

J Mol Biol (ENGLAND) Apr 8 1994, 237 (4) p479-99, ISSN 0022-2836

Journal Code: J6V

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/17 (Item 17 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08850034 94165034

Activation of the skeletal muscle calcium release channel by a cytoplasmic loop of the dihydropyridine receptor.

Lu X; Xu L; Meissner G

Department of Biochemistry, University of North Carolina, Chapel Hill
27599-7260.

J Biol Chem (UNITED STATES) Mar 4 1994, 269 (9) p6511-6, ISSN
0021-9258 Journal Code: HIV

Contract/Grant No.: AR 18687, AR, NIAMS

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/18 (Item 18 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08835812 94150812

A beta-subunit normalizes the electrophysiological properties of a cloned N-type Ca²⁺ channel alpha 1-subunit.

Stea A; Dubel SJ; Pragnell M; Leonard JP; Campbell KP; Snutch TP

Biotechnology Laboratory, University of British Columbia, Vancouver,
Canada.

Neuropharmacology (ENGLAND) Nov 1993, 32 (11) p1103-16, ISSN
0028-3908 Journal Code: NZB

Contract/Grant No.: NS26432, NS, NINDS
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/19 (Item 19 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08835724 94150724
Calcium channel beta-subunit binds to a conserved motif in the I-II
cytoplasmic linker of the alpha 1-subunit [see comments]
Pragnell M; De Waard M; Mori Y; Tanabe T; Snutch TP; Campbell KP
Howard Hughes Medical Institute, Department of Physiology, University of
Iowa College of Medicine, Iowa City 52242.
Nature (ENGLAND) Mar 3 1994, 368 (6466) p67-70, ISSN 0028-0836
Journal Code: NSC
Comment in Nature 1994 Mar 3;368(6466):15-6
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/20 (Item 20 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08756869 94071869
Single-channel analysis of a cloned human heart L-type Ca²⁺ channel alpha
1 subunit and the effects of a cardiac beta subunit.
Wakamori M; Mikala G; Schwartz A; Yatani A
Department of Pharmacology and Cell Biophysics, University of Cincinnati
College of Medicine, Ohio.
Biochem Biophys Res Commun (UNITED STATES) Nov 15 1993, 196 (3)
p1170-6, ISSN 0006-291X Journal Code: 9Y8
Contract/Grant No.: HL-43231, HL, NHLBI; HL-22619, HL, NHLBI; T32 HL07382
, HL, NHLBI; +
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/21 (Item 21 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08753893 94068893
Functional diversity of neuronal nicotinic acetylcholine receptors.
Patrick J; Sequela P; Vernino S; Amador M; Luetje C; Dani JA

Division of Neuroscience, Baylor College of Medicine, Houston, TX 77030.
Prog Brain Res (NETHERLANDS) 1993, 98 p113-20, ISSN 0079-6123
Journal Code: Q0B
Languages: ENGLISH
Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

12/3/22 (Item 22 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08737118 94052118
Voltage-dependent potentiation of the activity of cardiac L-type calcium channel alpha 1 subunits due to phosphorylation by cAMP-dependent protein kinase.
Sculptoreanu A; Rotman E; Takahashi M; Scheuer T; Catterall WA
Department of Pharmacology, University of Washington, Seattle 98195.
Proc Natl Acad Sci U S A (UNITED STATES) Nov 1 1993, 90 (21) p10135-9, ISSN 0027-8424 Journal Code: PV3
Contract/Grant No.: P01 HL44948, HL, NHLBI
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/23 (Item 23 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08734817 94049817
Okadaic acid, a protein phosphatase inhibitor, enhances transcription of a receptor gene containing sequence A of the human prolactin promoter.
Wera S; Belayew A; Martial JA
Laboratoire de Biologie Moleculaire et de Genie Genetique, Institut de Chimie B6, Universite de Liege, Sart-Tilman, Belgium.
Mol Endocrinol (UNITED STATES) Aug 1993, 7 (8) p965-71, ISSN 0888-8809 Journal Code: NGZ
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/24 (Item 24 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08727987 94042987
Stimulated Ca²⁺ influx raises mitochondrial free Ca²⁺ to supramicromolar levels in a pancreatic beta-cell line. Possible role in glucose and

agonist-induced insulin secretion.

Rutter GA; Theler JM; Murgia M; Wollheim CB; Pozzan T; Rizzuto R

Department of Medicine, University of Geneva, Switzerland.

J Biol Chem (UNITED STATES) Oct 25 1993, 268 (30) p22385-90, ISSN
0021-9258 Journal Code: HIV

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/25 (Item 25 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08714960 94029960

High, stable expression of the bovine histamine H1-receptor coupled to
[Ca²⁺]i mobilisation in CHO-K1 cells.

Iredale PA; Fukui H; Hill SJ

Department of Physiology and Pharmacology, Medical School, Queen's
Medical Centre, Nottingham, England.

Biochem Biophys Res Commun (UNITED STATES) Sep 30 1993, 195 (3)
p1294-300, ISSN 0006-291X Journal Code: 9Y8

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/26 (Item 26 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08708207 94023207

Substance P-induced elevation of intracellular calcium in transfected
Chinese hamster ovary cells: role of inositol trisphosphate.

Mochizuki-Oda N; Nakajima Y; Nakanishi S; Ito S

Department of Cell Biology, Osaka Bioscience Institute, Suita, Japan.

Regul Pept (NETHERLANDS) Jul 2 1993, 46 (1-2) p450-2, ISSN 0167-0115
Journal Code: RBB

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/27 (Item 27 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08694598 94009598

Requirement of the calcium channel beta subunit for functional
conformation.

Nishimura S; Takeshima H; Hofmann F; Flockerzi V; Imoto K
Department of Medical Chemistry, Kyoto University Faculty of Medicine,
Japan.

FEBS Lett (NETHERLANDS) Jun 21 1993, 324 (3) p283-6, ISSN 0014-5793
Journal Code: EUH
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/28 (Item 28 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08691996 94006996

Subunit-dependent modulation of *recombinant* L-type *calcium* *channels*
. Molecular basis for dihydropyridine tissue selectivity.

Welling A; Kwan YW; Bosse E; Flockerzi V; Hofmann F; Kass RS
Department of Physiology, University of Rochester School of Medicine and
Dentistry, NY 14642-8642.

Circ Res (UNITED STATES) Nov 1993, 73 (5) p974-80, ISSN 0009-7330
Journal Code: DAJ
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/29 (Item 29 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08681433 93391433

Recombinant human insulin-like growth factor I exerts a trophic action
and confers glutamate sensitivity on glutamate-resistant cerebellar granule
cells.

Calissano P; Ciotti MT; Battistini L; Zona C; Angelini A; Merlo D;
Mercanti D

Institute of Neurobiology, Consiglio Nazionale delle Ricerche, Rome,
Italy.

Proc Natl Acad Sci U S A (UNITED STATES) Sep 15 1993, 90 (18) p8752-6,
ISSN 0027-8424 Journal Code: PV3
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/30 (Item 30 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08581436 93291436

Interleukin-2 modulates calcium currents in dissociated hippocampal CA1 neurons.

Plata-Salaman CR; French-Mullen JM

School of Life and Health Sciences, University of Delaware, Newark 19716.

Neuroreport (ENGLAND) May 1993, 4 (5) p579-81, ISSN 0959-4965

Journal Code: A6M

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/31 (Item 31 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08546884 93256884

Identification of the domain recognized by anti-(ryanodine receptor) antibodies which affect Ca(2+)-induced Ca²⁺ release.

Treves S; Chiozzi P; Zorzato F

Istituto di Patologia Generale, Universita degli Studi di Ferrara, Italy.

Biochem J (ENGLAND) May 1 1993, 291 (Pt 3) p757-63, ISSN 0264-6021

Journal Code: 9YO

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/32 (Item 32 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08506753 93216753

Characterization of adenylate cyclase toxin from a mutant of Bordetella pertussis defective in the activator gene, cyaC.

Hewlett EL; Gray MC; Ehrmann IE; Maloney NJ; Otero AS; Gray L; Allietta M ; Szabo G; Weiss AA; Barry EM

Department of Medicine, University of Virginia School of Medicine, Charlottesville 22908.

J Biol Chem (UNITED STATES) Apr 15 1993, 268 (11) p7842-8, ISSN 0021-9258 Journal Code: HIV

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/33 (Item 33 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08453581 93163581

Receptor-activated calcium influx in human monocytes exposed to monocyte chemotactic protein-1 and related cytokines.

Sozzani S; Molino M; Locati M; Luini W; Cerletti C; Vecchi A; Mantovani A
Istituto di Ricerche Farmacologiche Mario Negri, Milan, Italy.

J Immunol (UNITED STATES) Feb 15 1993, 150 (4) p1544-53, ISSN
0022-1767 Journal Code: IFB

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/34 (Item 34 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08404455 93114455

Characterization of beta subunit modulation of a rabbit cardiac L-type Ca²⁺ channel alpha 1 subunit as expressed in mouse L cells.

Lory P; Varadi G; Sligh DF; Varadi M; Schwartz A

Department of Pharmacology and Cell Biophysics, University of Cincinnati,
OH 45267-0575.

FEBS Lett (NETHERLANDS) Jan 4 1993, 315 (2) p167-72, ISSN 0014-5793
Journal Code: EUH

Contract/Grant No.: HL-43231, HL, NHLBI; HL-22619, HL, NHLBI; T32 HL07382
, HL, NHLBI

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/35 (Item 35 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08344582 93054582

Expression of a cDNA for a neuronal calcium channel alpha 1 subunit enhances secretion from adrenal chromaffin cells.

Ma WJ; Holz RW; Uhler MD

Shanghai Institute of Materia Medica, Chinese Academy of Science.

J Biol Chem (UNITED STATES) Nov 15 1992, 267 (32) p22728-32, ISSN
0021-9258 Journal Code: HIV

Contract/Grant No.: DK27959, DK, NIDDK

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/36 (Item 36 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) .format only 1996 Knight-Ridder Info. All rts. reserv.

08266941 92404941

Interleukin-1 beta depresses calcium currents in CA1 hippocampal neurons at pathophysiological concentrations.

Plata-Salaman CR; Ffrench-Mullen JM

School of Life and Health Sciences, University of Delaware, Newark 19716.

Brain Res Bull (UNITED STATES) Aug 1992, 29 (2) p221-3, ISSN

0361-9230 Journal Code: B5M

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/37 (Item 37 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08197886 92335886

Structure and functional expression of an omega-conotoxin-sensitive human N-type calcium channel.

Williams ME; Brust PF; Feldman DH; Patthi S; Simerson S; Maroufi A; McCue AF; Velicelebi G; Ellis SB; Harpold MM

SIBIA, Inc., La Jolla, CA 92037.

Science (UNITED STATES) Jul 17 1992, 257 (5068) p389-95, ISSN

0036-8075 Journal Code: UJ7

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/38 (Item 38 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08151666 92289666

Stable and functional expression of the calcium channel alpha 1 subunit from smooth muscle in somatic cell lines.

Bosse E; Bottlender R; Kleppisch T; Hescheler J; Welling A; Hofmann F; Flockerzi V

Institut fur Pharmakologie und Toxikologie, Technische Universitat Munchen, FRG.

EMBO J (ENGLAND) Jun 1992, 11 (6) p2033-8, ISSN 0261-4189

Journal Code: EMB

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/39 (Item 39 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08150208 92288208

Calcium channel and membrane fusion activity of synexin and other members of the Annexin gene family.

Pollard HB; Guy HR; Arispe N; de la Fuente M; Lee G; Rojas EM; Pollard JR ; Srivastava M; Zhang-Keck ZY; Merezhinskaya N; et al

Laboratory of Cell Biology and Genetics, National Institute of Diabetes, Digestive, and Kidney Diseases, National Institutes of Health, Bethesda, Maryland 20892.

Biophys J (UNITED STATES) Apr 1992, 62 (1) p15-8, ISSN 0006-3495

Journal Code: A5S

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/40 (Item 40 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

08080398 92218398

Mechanism of Ca^{2+} inhibition of inositol 1,4,5-trisphosphate (InsP3) binding to the cerebellar InsP3 receptor.

Mignery GA; Johnston PA; Sudhof TC

Department of Molecular Genetics, University of Texas Southwestern Medical Center, Dallas 75235.

J Biol Chem (UNITED STATES) Apr 15 1992, 267 (11) p7450-5, ISSN 0021-9258 Journal Code: HIV

Contract/Grant No.: RO1 HL39644, HL, NHLBI; RO1 MH47510, MH, NIMH

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/41 (Item 41 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07974903 92112903

Cloning and expression of a cardiac/brain beta subunit of the L-type calcium channel.

Perez-Reyes E; Castellano A; Kim HS; Bertrand P; Baggstrom E; Lacerda AE; Wei XY; Birnbaumer L

Department of Molecular Physiology and Biophysics, Baylor College of Medicine, Houston, Texas 77030.

J Biol Chem (UNITED STATES) Jan 25 1992, 267 (3) p1792-7, ISSN 0021-9258 Journal Code: HIV

Contract/Grant No.: HL-37044, HL, NHLBI
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/42 (Item 42 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07939281 92077281
Conditional immortalization of normal and dysgenic mouse muscle cells by the SV40 large T antigen under the vimentin promoter control.
Pincon-Raymond M; Vicart P; Bois P; Chassande O; Romey G; Varadi G; Li ZL ; Lazdunski M; Rieger F; Paulin D
Groupe de Biologie Developpement et Regeneration du Systeme Neuromusculaire INSERM U.153 et UA 614 CNRS, Paris, France.
Dev Biol (UNITED STATES) Dec 1991, 148 (2) p517-28, ISSN 0012-1606
Journal Code: E7T
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/43 (Item 43 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07936771 92074771
Properties and modification of recombinant human synexin (annexin VII).
Burns AL; Magendzo K; Srivastava M; Rojas E; Cultraro C; de la Fuente M; Heldman J; Parra C; Pollard HB
Laboratory of Cell Biology and Genetics, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland 20892.
Ann N Y Acad Sci (UNITED STATES) 1991, 635 p450-1, ISSN 0077-8923
Journal Code: 5NM
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/44 (Item 44 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07896682 92034682
Inhibition of cell proliferation, protein kinase C, and phorbol ester-induced fos expression by the dihydropyridine derivative B859-35.
Uberall F; Maly K; Egle A; Doppler W; Hofmann J; Grunicke HH

Institute of Medical Chemistry and Biochemistry, University of Innsbruck,
Austria.

Cancer Res (UNITED STATES) Nov 1 1991, 51 (21) p5821-5, ISSN
0008-5472 Journal Code: CNF

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/45 (Item 45 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07879402 92017402

Annexins: calcium-binding proteins of multi-functional importance?

Romisch J; Paques EP

Research Laboratories, Behringwerke AG, Marburg/Lahn, Federal Republic of
Germany.

Med Microbiol Immunol (Berl) (GERMANY) 1991, 180 (3) p109-26, ISSN
0300-8584 Journal Code: M58

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

12/3/46 (Item 46 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07854107 91373107

Mitogenic and chemotactic effects of platelet-derived growth factor on
human retinal glial cells.

Uchihoori Y; Puro DG

Department of Ophthalmology, University of Michigan School of Medicine,
Ann Arbor.

Invest Ophthalmol Vis Sci (UNITED STATES) Sep 1991, 32 (10) p2689-95,
ISSN 0146-0404 Journal Code: GWI

Contract/Grant No.: EY-06931, EY, NEI; EY-07003, EY, NEI

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/47 (Item 47 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07813947 91332947

Analysis of a decreased Na⁺ conductance by tumor necrosis factor in
identified neurons of *Aplysia kurodai*.

Sawada M; Hara N; Maeno T
Department of Physiology, Shimane Medical University, Izumo, Japan.
J Neurosci Res (UNITED STATES) Apr 1991, 28 (4) p466-73, ISSN
0360-4012 Journal Code: KAC
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/48 (Item 48 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07780339 91299339
Distinct calcium channels are generated by alternative splicing and are
differentially expressed in the mammalian CNS.
Snutch TP; Tomlinson WJ; Leonard JP; Gilbert MM
Biotechnology Laboratory, Department of Neuroscience, University of
British Columbia, Vancouver, Canada.
Neuron (UNITED STATES) Jul 1991, 7 (1) p45-57, ISSN 0896-6273
Journal Code: AN8
Contract/Grant No.: NS-26432, NS, NINDS
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/49 (Item 49 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07780338 91299338
Molecular cloning of multiple subtypes of a novel rat brain isoform of
the alpha 1 subunit of the voltage-dependent calcium channel.
Hui A; Ellinor PT; Krizanova O; Wang JJ; Diebold RJ; Schwartz A
Department of Pharmacology and Cell Biophysics, University of Cincinnati
College of Medicine, Ohio 45267-0575.
Neuron (UNITED STATES) Jul 1991, 7 (1) p35-44, ISSN 0896-6273
Journal Code: AN8
Contract/Grant No.: R37-HL43231-01, HL, NHLBI; P01-HL22619-12, HL, NHLBI;
HL41496, HL, NHLBI
Languages: ENGLISH
Document type: JOURNAL ARTICLE

12/3/50 (Item 50 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07764512 91283512

Early response of cultured lepidopteran cells to exposure to delta-endotoxin from *Bacillus thuringiensis*: involvement of calcium and anionic channels.

Schwartz JL; Garneau L; Masson L; Brousseau R

Institute for Biological Sciences, National Research Council, Ottawa, Canada.

Biochim Biophys Acta (NETHERLANDS) Jun 18 1991, 1065 (2) p250-60,
ISSN 0006-3002 Journal Code: AOW

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/51 (Item 51 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07748283 91267283

The role of calcium in luteinizing hormone/human chorionic gonadotrophin stimulation of Leydig cell immunoactive inhibin secretion in vitro.

Simpson BJ; Risbridger GP; Hedger MP; de Kretser DM

Department of Anatomy, Monash University, Melbourne, Victoria, Australia.

Mol Cell Endocrinol (NETHERLANDS) Jan 1991, 75 (1) p49-56, ISSN
0303-7207 Journal Code: E69

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/52 (Item 52 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07722193 91241193

Synergistic effect of intraperitoneally administered *calcium* *channel* blockade and *recombinant* tissue plasminogen activator to prevent adhesion formation in an animal model.

Dunn RC; Steinleitner AJ; Lambert H

Department of Obstetrics and Gynecology, Baylor College of Medicine, Houston, TX 77030.

Am J Obstet Gynecol (UNITED STATES) May 1991, 164 (5 Pt 1) p1327-30,
ISSN 0002-9378 Journal Code: 3NI

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/53 (Item 53 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07546936 91065936

Calcium-activated endonexin II forms calcium channels across acidic phospholipid bilayer membranes.

Rojas E; Pollard HB; Haigler HT; Parra C; Burns AL

Laboratory of Cell Biology and Genetics, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland 20892.

J Biol Chem (UNITED STATES) Dec 5 1990, 265 (34) p21207-15, ISSN 0021-9258 Journal Code: HIV

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/54 (Item 54 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07468503 90375503

Blockade of low and high threshold Ca^{2+} channels by diphenylbutylpiperidine antipsychotics linked to inhibition of prolactin gene expression.

Enyeart JJ; Biagi BA; Day RN; Sheu SS; Maurer RA

Department of Pharmacology, Ohio State University, Columbus 43210-1239.

J Biol Chem (UNITED STATES) Sep 25 1990, 265 (27) p16373-9, ISSN 0021-9258 Journal Code: HIV

Contract/Grant No.: DK-40131, DK, NIDDK; DK-36407, DK, NIDDK; HL-33333, HL, NHLBI; +

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/55 (Item 55 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07399391 90306391

The cDNA and deduced amino acid sequence of the gamma subunit of the L-type calcium channel from rabbit skeletal muscle.

Bosse E; Regulla S; Biel M; Ruth P; Meyer HE; Flockerzi V; Hofmann F

Medizinische Biochemie, Universitat des Saarlandes, Homburg/Saar, FRG.

FEBS Lett (NETHERLANDS) Jul 2 1990, 267 (1) p153-6, ISSN 0014-5793 Journal Code: EUH

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/56 (Item 56 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07316047 90223047

HIV-1 coat protein neurotoxicity prevented by calcium channel antagonists
[see comments]

Dreyer EB; Kaiser PK; Offermann JT; Lipton SA

Department of Neurology, Children's Hospital, Boston, MA.

Science (UNITED STATES) Apr 20 1990, 248 (4953) p364-7, ISSN

0036-8075 Journal Code: UJ7

Contract/Grant No.: EY 05477, EY, NEI; NS 01395, NS, NINDS

Comment in Science 1990 Apr 20;248(4953):303

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/57 (Item 57 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07145860 90052860

Changes in early and late steps of T cell activation by WT31 MoAb.

Gupta S; Shimizu M; Batra R; Vayuvegula B

Division of Basic and Clinical Immunology, University of California,
Irvine 92717.

Adv Exp Med Biol (UNITED STATES) 1989, 254 p35-42, ISSN 0065-2598

Journal Code: 2LU

Contract/Grant No.: AI-26456; GM-41514

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/58 (Item 58 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

06882632 89184632

Ca²⁺-channel blockers inhibit the action of recombinant platelet-derived
growth factor in vascular smooth muscle cells.

Block LH; Emmons LR; Vogt E; Sachinidis A; Vetter W; Hoppe J

Department of Medicine, University of Freiburg, Federal Republic of
Germany.

Proc Natl Acad Sci U S A (UNITED STATES) Apr 1989, 86 (7) p2388-92,

ISSN 0027-8424 Journal Code: PV3

Languages: ENGLISH

Document type: JOURNAL ARTICLE

12/3/59 (Item 1 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1997 Inst for Sci Info. All rts. reserv.

13697424 Genuine Article#: QJ138 No. References: 23
Title: PURIFICATION AND CHARACTERIZATION OF INSECTICIDAL TOXINS FROM VENOM
GLANDS OF THE PARASITIC WASP, BRACON-HEBETOR
Author(s): QUISTAD GB; NGUYEN Q; BERNASCONI P; LEISY DJ
Corporate Source: UNIV CALIF BERKELEY,DEPT ENVRIONM SCI POLICY &
MANAGEMENT,ENVIRONM CHEM & TOXICOL LAB/BERKELEY//CA/94720; SANDOZ AGRO
INC/PALO ALTO//CA/94304
Journal: INSECT BIOCHEMISTRY AND MOLECULAR BIOLOGY, 1994, V24, N10 (DEC), P
955-961
ISSN: 0965-1748
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

12/3/60 (Item 2 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1997 Inst for Sci Info. All rts. reserv.

13001802 Genuine Article#: NE895 No. References: 29
Title: REGULATION OF THE CLONED L-TYPE CARDIAC CALCIUM-CHANNEL BY
CYCLIC-AMP-DEPENDENT PROTEIN-KINASE
Author(s): PEREZREYES E; YUAN WL; WEI XY; BERS DM
Corporate Source: LOYOLA UNIV,MED CTR,DEPT PHYSIOL/MAYWOOD//IL/60153
Journal: FEBS LETTERS, 1994, V342, N2 (APR 4), P119-123
ISSN: 0014-5793
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

12/3/61 (Item 3 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1997 Inst for Sci Info. All rts. reserv.

10824225 Genuine Article#: FJ930 No. References: 0
Title: THE EFFECTS OF SEVERAL PHARMACOLOGICAL AGENTS UPON POSTISCHEMIC
RECOVERY
Author(s): YAMAMOTO F; YAMAMOTO H; YOSHIDA S; ICHIKAWA H; TAKAHASHI A;
TANAKA K; KOSAKAI Y; YAGIHARA T; FUJITA T
Corporate Source: NATL CARDIOVASC CTR,DEPT CARDIOVASC SURG,5-125 FUJISHIRO
DAI/SUITA/OSAKA 565/JAPAN/
Journal: CARDIOVASCULAR DRUGS AND THERAPY, 1991, V5, S2, P301-308
Language: ENGLISH Document Type: ARTICLE (Abstract Available) (NO REFS)

KEYED)

12/3/62 (Item 4 from file: 434)

DIALOG(R)File 434:Scisearch(R) Cited Ref Sci

(c) 1997 Inst for Sci Info. All rts. reserv.

07516051 Genuine Article#: D9569 No. References: 72

Title: STIMULATION OF THE ANTIGEN RECEPTOR ON WEHI-231 B-LYMPHOMA CELLS
RESULTS IN A VOLTAGE-INDEPENDENT INCREASE IN CYTOPLASMIC CALCIUM

Author(s): LABAER J; TSIEN RY; FAHEY KA; DEFRANCO AL

Corporate Source: UNIV CALIF SAN FRANCISCO,DEPT MICROBIOL & IMMUNOL/SAN
FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT BIOCHEM/SAN
FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,GEORGE WILLIAMS
HOOPERFDN/SAN FRANCISCO//CA/94143; UNIV CALIF BERKELEY,DEPT PHYSIOL &
ANAT/BERKELEY//CA/94720

Journal: JOURNAL OF IMMUNOLOGY, 1986, V137, N6, P1836-1844

Language: ENGLISH Document Type: ARTICLE

?

et	Items	Description
S1	0	DROSOPHILA ((W) PARA VOLTAGE (W) ACTIVATED (W) SODIUM (W) CHANNEL
S2	0	DROSOPHILA ((W) PARA (W) VOLTAGE (W) ACTIVATED (W) SODIUM (W) CHAN- NEL
S3	0	DROSOPHILIA ((W) PARA (W) VOLTAGE (W) ACTIVATED (W) SODIUM (W) CHA- NNEL
S4	0	DROSOPH? ((W) PARA (W) VOLTAGE (W) ACTIVATED (W) SODIUM (W) CHANNEL
S5	2	PARA (W) VOLTAGE (W) ACTIVATED (W) SODIUM (W) CHANNEL
S6	60988	CALCIUM (W) CHANNEL?
S7	60988	CALCIUM (W) CHANNEL?
S8	255537	RECOMBINANT
S9	679	S7 AND S8
S10	137	S7 (5N) S8
S11	105	RD (unique items)
S12	63	S11 NOT PY >1994
?		

* S18 2 S7 AND S13
?t s18/3,ab/1-2

18/3,AB/1. (Item 1 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1997 Inst for Sci Info. All rts. reserv.

14200733 Genuine Article#: RW693 Number of References: 65
Title: CLONING AND FUNCTIONAL-ANALYSIS OF *TIPE*, A NOVEL MEMBRANE-PROTEIN
 THAT ENHANCES DROSOPHILA PARA SODIUM-CHANNEL FUNCTION
Author(s): FENG GP; DEAK P; CHOPRA M; HALL LM
Corporate Source: WASHINGTON UNIV,SCH MED,DEPT ANAT & NEUROBIOL/ST
 LOUIS//MO/63110; SUNY BUFFALO,DEPT BIOCHEM PHARMACOL/BUFFALO//NY/14260
Journal: CELL, 1995, V82, N6 (SEP 22), P1001-1011
ISSN: 0092-8674
Language: ENGLISH Document Type: ARTICLE
Abstract: Voltage-dependent sodium channels are involved in the initiation
 and propagation of action potentials in many excitable cells. Here we
 report that *tipE*, a gene defined by a temperature-sensitive paralytic
 mutation in Drosophila, encodes a novel integral membrane protein that
 dramatically stimulates functional expression in Xenopus oocytes of the
 Drosophila sodium channel a subunit encoded by the paralytic (para)
 locus. Using a heat shock promoter to control *tipE*(+) gene expression
 in transgenic flies, we demonstrate that *tipE*(+) gene expression is
 required during pupal development to rescue adult paralysis. In
 addition, we demonstrate a role for the *tipE* gene product in adults.

18/3,AB/2 (Item 2 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
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13767047 Genuine Article#: QN975 Number of References: 55
Title: CYTOGENETIC AND MOLECULAR LOCALIZATION OF *TIPE* - A GENE AFFECTING
 SODIUM-CHANNELS IN DROSOPHILA-MELANOGASTER
Author(s): FENG GP; DEAK P; KASBEKAR DP; GIL DW; HALL LM
Corporate Source: SUNY BUFFALO,DEPT BIOCHEM PHARMACOL,329 HOCHSTETTER
 HALL,NORTH CAMPUS/BUFFALO//NY/14260; SUNY BUFFALO,DEPT BIOCHEM
 PHARMACOL/BUFFALO//NY/14260; YESHIVA UNIV ALBERT EINSTEIN COLL MED,DEPT
 MOLEC GENET/BRONX//NY/10461
Journal: GENETICS, 1995, V139, N4 (APR), P1679-1688
ISSN: 0016-6731
Language: ENGLISH Document Type: ARTICLE
Abstract: Voltage-sensitive sodium channels play a key role in nerve cells
 where they are responsible for the increase in sodium permeability
 during the rising phase of action potentials. In Drosophila

melanogaster a subset of temperature-sensitive paralytic mutations affect sodium channel function. One such mutation is temperature-induced paralysis locus E (*tipE*), which has been shown by electrophysiology and ligand binding studies to reduce sodium channel numbers. Three new gamma-ray-induced *tipE* alleles associated with either visible deletions in 64AB or a translocation breakpoint within 64B2 provide landmarks for positional cloning of *tipE*. Beginning with the flanking cloned gene Ras2 a 140-kb walk across the translocation breakpoint was completed. Germline transformation using a 42-kb cosmid clone and successively smaller subclones localized the *tipE* gene within a 7.4-kb genomic DNA segment. Although this chromosome region is rich in transcripts, only three overlapping mRNAs (5.4, 4.4, and 1.7 kb) lie completely within the smallest rescuing construct. The small sizes of the rescuing construct and transcripts suggest that *tipE* does not encode a standard sodium channel alpha-subunit with four homologous repeats. Sequencing these transcripts will elucidate the role of the *tipE* gene product in sodium channel functional regulation.

?ds

Set	Items	Description
S1	0	DROSOPHILA ((W) PARA VOLTAGE (W) ACTIVATED (W) SODIUM (W) CHANNEL
S2	0	DROSOPHILA ((W) PARA (W) VOLTAGE (W) ACTIVATED (W) SODIUM (W) CHAN- NEL
S3	0	DROSOPHILIA ((W) PARA (W) VOLTAGE (W) ACTIVATED (W) SODIUM (W) CHA- NNEL
S4	0	DROSOPH? ((W) PARA (W) VOLTAGE (W) ACTIVATED (W) SODIUM (W) CHANNEL
S5	2	PARA (W) VOLTAGE (W) ACTIVATED (W) SODIUM (W) CHANNEL
S6	60988	CALCIUM (W) CHANNEL?
S7	60988	CALCIUM (W) CHANNEL?
S8	255537	RECOMBINANT
S9	679	S7 AND S8
S10	137	S7 (5N) S8
S11	105	RD (unique items)
S12	63	S11 NOT PY >1994
S13	111	TIPE
S14	107	RD (unique items)
S15	1	MELANOGASTOR
S16	39120	MELANOGASTER
S17	1	S14 AND S16
S18	2	S7 AND S13
?		

10 AU=VAN DER PLOEG L
 1 AU=VAN DER PLOEG L H
 119 AU=VAN DER PLOEG L H T
 1 AU=VAN DER PLOEG L.
 70 AU=VAN DER PLOEG L.H.T.
 83 AU=VAN DER PLOEG LH
 1 AU=VAN DER PLOEG LHT

S1 285 E3-E9

?s voltage(W)activated(W)cation(W) channel?

Processing

491508 VOLTAGE
 523060 ACTIVATED
 147851 CATION
 697945 CHANNEL?

S2 14 VOLTAGE (W) ACTIVATED (W) CATION (W) CHANNEL?

?t s2/3,ab/1-14

2, 3, 12

2/3,AB/1 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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09736669 96258269

Contribution of the S4 segment to gating charge in the Shaker K+ channel.
 Aggarwal SK; MacKinnon R

Department of Neurobiology, Harvard Medical School, Boston, Massachusetts
 02115, USA.

Neuron (UNITED STATES) Jun 1996, 16 (6) p1169-77, ISSN 0896-6273

Journal Code: AN8

Contract/Grant No.: MH 10989, MH, NIMH

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Voltage-activated ion channels respond to changes in membrane voltage by coupling the movement of charges to channel opening. A K+ channel-specific radioligand was designed and used to determine the origin of these gating charges in the Shaker K+ channel. Opening of a Shaker K+ channel is associated with a displacement of 13.6 electron charge units. Gating charge contributions were determined for six of the seven positive charges in the S4 segment, an unusual amino acid sequence in *voltage*-activated* cation* channels* consisting of repeating basic residues at every third position. Charge-neutralizing mutations of the first four positive charges led to large decreases (approximately 4 electron charge units each) in the gating charge; however, the gating charge of Shaker delta 10, a Shaker K+ channel with 10 altered nonbasic residues in its S4 segment, was found to be identical to the wild-type channel. These findings show that movement of the NH2-terminal half but not the CO2H-terminal end of the S4 segment

underlies gating charge, and that this portion of the S4 segment appears to move across the entire transmembrane voltage difference in association with channel activation.

2/3,AB/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07578787 91097787

Mapping the receptor site for charybdotoxin, a pore-blocking potassium channel inhibitor.

MacKinnon R; Heginbotham L; Abramson T
Department of Cellular and Molecular Physiology, Harvard Medical School,
Boston, Massachusetts 02115.

Neuron (UNITED STATES) Dec 1990, 5 (6) p767-71, ISSN 0896-6273
Journal Code: AN8

Contract/Grant No.: GM43949, GM, NIGMS

Languages: ENGLISH

Document type: JOURNAL ARTICLE

The Shaker K⁺ channel belongs to a family of structurally related *voltage*-activated* cation* channels* that play a central role in cellular electrical signaling. By studying multiple site-directed mutants of the Shaker K⁺ channel, a region that forms the binding site for a pore-blocking scorpion toxin has been identified. The region contains a sequence that is highly conserved among cloned K⁺ channels and may contribute to the formation of the ion conduction pore.

2/3,AB/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 1996 Knight-Ridder Info. All rts. reserv.

07185129 90092129

Identification of P2Y purinoceptors associated with *voltage*-activated* cation* channels* in cardiac ventricular myocytes of the rat.

Bjornsson OG; Monck JR; Williamson JR
Department of Biochemistry & Biophysics, University of Pennsylvania,
Philadelphia 19104-6089.

Eur J Biochem (GERMANY, WEST) Dec 8 1989, 186 (1-2) p395-404, ISSN
0014-2956 Journal Code: EMZ

Contract/Grant No.: HL-14461

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Extracellular ATP has vasodilatory and inotropic effects in the heart. We have demonstrated that extracellular ATP, in a concentration-dependent manner (10 nM-0.1 mM), increased [Ca²⁺]_i in suspensions of isolated

fura-2-loaded rat cardiac ventricular myocytes (maximum $96 \pm 10\%$ increase over basal levels, SEM, $n = 12$, P less than 0.01). The increase in $[Ca^{2+}]_i$ was often biphasic, with an initial fast phase (less than 1 s) of low amplitude, followed by a slower phase of higher amplitude. A second application of ATP had little effect, and ATP abolished the effect of subsequent electrical stimulations, even through the cells were still able to respond with an increase in $[Ca^{2+}]_i$ to KCl-induced depolarization or stimulation by caffeine. Pretreatment of cells with nifedipine, verapamil, caffeine, ryanodine, or 8-(N,N-diethylamino)octyl 3,4,5-trimethoxybenzoate hydrochloride attenuated the effect of extracellular ATP on $[Ca^{2+}]_i$, and binding of extracellular free calcium by excess EGTA completely abolished the effects of extracellular ATP and electrical stimulation. Extracellular ATP increased bisoxonol fluorescence in ventricular myocytes, indicating depolarization of the sarcolemma. Pretreatment of the myocytes with tetrodotoxin (50 μM), or replacement of NaCl in the incubation buffer with the impermeant cation N-methyl-D-glucamine, suppressed the extracellular ATP effect on $[Ca^{2+}]_i$. ADP and AMP had smaller effects on $[Ca^{2+}]_i$ than ATP; adenosine had no effect. ATP analogues showed the following rank order of potency in increasing $[Ca^{2+}]_i$ or bisoxonol fluorescence: ATP greater than or equal to 2-methylthioATP much greater than adenosine 5'-O-[3-thio]triphosphate greater than adenosine 5'-[alpha, beta-methylene]triphosphate approximately adenosine 5'-[beta, gamma-methylene]triphosphate approximately adenosine 5'-[beta, gamma-imino]triphosphate greater than adenosine. These data are consistent with the presence of purinoceptors (P2Y subtype) on the sarcolemma of cardiac ventricular myocytes of the rat, which upon activation lead to depolarization and activation of cation channels of the sarcolemma and flux of extracellular Ca^{2+} into the cells. This may result in further flux of Ca^{2+} into the cytosol from intracellular stores. The effects of extracellular ATP on $[Ca^{2+}]_i$ in rat cardiac ventricular myocytes may, in part, explain the direct inotropic effects of extracellular ATP on the mammalian heart.

2/3,AB/4 (Item 1 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

14865826 Genuine Article#: UU118 Number of References: 40
Title: CONTRIBUTION OF THE S4 SEGMENT TO GATING CHARGE IN THE SHAKER K+ CHANNEL
Author(s): AGGARWAL SK; MACKINNON R
Corporate Source: HARVARD UNIV,SCH MED,DEPT NEUROBIOL/BOSTON//MA/02115
Journal: NEURON, 1996, V16, N6 (JUN), P1169-1177
ISSN: 0896-6273
Language: ENGLISH Document Type: ARTICLE
Abstract: Voltage-activated ion channels respond to changes in membrane

voltage by coupling the movement of charges to channel opening. A K⁺ channel-specific radioligand was designed and used to determine the origin of these gating charges in the Shaker K⁺ channel. Opening of a Shaker K⁺ channel is associated with a displacement of 13.6 electron charge units. Gating charge contributions were determined for six of the seven positive charges in the S4 segment, an unusual amino acid sequence in *voltage*-activated *cation* channels consisting of repeating basic residues at every third position. Charge-neutralizing mutations of the first four positive charges led to large decreases (similar to 4 electron charge units each) in the gating charge; however, the gating charge of Shaker Delta 10, a Shaker K⁺ channel with 10 altered nonbasic residues in its S4 segment, was found to be identical to the wild-type channel. These findings show that movement of the NH₂-terminal half but not the CO₂H-terminal end of the S4 segment underlies gating charge, and that this portion of the S4 segment appears to move across the entire transmembrane voltage difference in association with channel activation.

2/3,AB/5 (Item 2 from file: 434)

DIALOG(R)File 434:Scisearch(R) Cited Ref Sci

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12831175 Genuine Article#: MR344 Number of References: 31

Title: A REEVALUATION OF THE STRUCTURE IN THE PORE REGION OF *VOLTAGE*-
ACTIVATED *CATION* *CHANNELS*

Author(s): SCHETZ JA; ANDERSON PAV

Corporate Source: UNIV FLORIDA,WHITNEY LAB,9505 OCEAN SHORE BLVD/ST

AUGUSTINE//FL/32086; UNIV FLORIDA,DEPT NEUROSCI/ST AUGUSTINE//FL/32086;

UNIV FLORIDA,DEPT PHYSIOL/ST AUGUSTINE//FL/32086

Journal: BIOLOGICAL BULLETIN, 1993, V185, N3 (DEC), P462-466

ISSN: 0006-3185

Language: ENGLISH Document Type: NOTE

Abstract: Members of the Voltage-Sensitive Cation Channel (VSCC)

superfamily form highly selective voltage-gated pores in excitable membranes. These pores are thought to be formed by the extracellular loops that interconnect transmembrane segments 5 and 6 in each of the four domains that constitute the channel. Each of these loops is currently modeled as consisting of two short segments, SS1 and SS2, that are linked by a hairpin turn to form an antiparallel structure. In this study, the hypothesized beta-turn in the S5-S6 loop of each of 80 domains from the VSCC superfamily (26 different channel isoforms) were identified and located on the basis of their significant local maxima for beta-turn propensity (P-bend). Significant beta-turns were identified in all 80 sequences, but they are shifted, and lie in the region currently defined as the SS2 beta-strand. This location of the beta-turn is incompatible with an antiparallel beta-sheet structure

of the pore. The region identified here as forming the turn corresponds to the ion selective determinants in the pore, implying that the turn imparts some of the ionic selectivity of each channel.

2/3,AB/6 (Item 3 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

10584415 Genuine Article#: EQ381 Number of References: 26
Title: MAPPING THE RECEPTOR-SITE FOR CHARYBDOTOXIN, A PORE-BLOCKING
POTASSIUM CHANNEL INHIBITOR
Author(s): MACKINNON R; HEGINBOTHAM L; ABRAMSON T
Corporate Source: HARVARD UNIV,SCH MED,DEPT CELLULAR & MOLEC
PHYSIOL/BOSTON//MA/02115; HARVARD UNIV,SCH MED,PROGRAM
NEUROSCI/BOSTON//MA/02115
Journal: NEURON, 1990, V5, N6, P767-771
Language: ENGLISH Document Type: ARTICLE
Abstract: The Shaker K+ channel belongs to a family of structurally related
voltage-*activated* *cation* *channels* that play a central role in
cellular electrical signaling. By studying multiple site-directed
mutants of the Shaker K+ channel, a region that forms the binding site
for a pore-blocking scorpion toxin has been identified. The region
contains a sequence that is highly conserved among cloned K+ channels
and may contribute to the formation of the ion conduction pore.

2/3,AB/7 (Item 4 from file: 434)
DIALOG(R)File 434:Scisearch(R) Cited Ref Sci
(c) 1996 Inst for Sci Info. All rts. reserv.

09870710 Genuine Article#: CE483 Number of References: 57
Title: IDENTIFICATION OF P2Y PURINOCEPTORS ASSOCIATED WITH *VOLTAGE*-*
ACTIVATED *CATION* *CHANNELS* IN CARDIAC VENTRICULAR MYOCYTES OF THE
RAT
Author(s): BJORNSSON OG; MONCK JR; WILLIAMSON JR
Corporate Source: UNIV PENN,DEPT BIOCHEM & BIOPHYS,37TH & HAMILTON
WALK/PHILADELPHIA//PA/19104
Journal: EUROPEAN JOURNAL OF BIOCHEMISTRY, 1989, V186, N1-2, P395-404
Language: ENGLISH Document Type: ARTICLE

2/3,AB/8 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 1996 Elsevier Science B.V. All rts. reserv.

10027507 EMBASE No: 96205131

Contribution of the S4 segment to gating charge in the Shaker K⁺ channel
Aggarwal S.K.; MacKinnon R.

Rockefeller University, 1230 York Avenue, New York, NY 10021 USA

Neuron (USA) , 1996, 16/6 (1169-1177) CODEN: NERNE ISSN: 0896-6273

LANGUAGES: English SUMMARY LANGUAGES: English

Voltage-activated ion channels respond to changes in membrane voltage by coupling the movement of charges to channel opening. A K⁺ channel-specific radioligand was designed and used to determine the origin of these gating charges in the Shaker K⁺ channel. Opening of a Shaker K⁺ channel is associated with a displacement of 13.6 electron charge units. Gating charge contributions were determined for six of the seven positive charges in the S4 segment, an unusual amino acid sequence in *voltage*-activated* cation* channels* consisting of repeating basic residues at every third position. Charge-neutralizing mutations of the first four positive charges led to large decreases (similar to 4 electron charge units each) in the gating charge; however, the gating charge of Shaker Delta10, a Shaker K⁺ channel with 10 altered nonbasic residues in its S4 segment, was found to be identical to the wild-type channel. These findings show that movement of the NH₂-terminal half but not the CO₂H-terminal end of the S4 segment underlies gating charge, and that this portion of the S4 segment appears to move across the entire transmembrane voltage difference in association with channel activation.

2/3,AB/9 (Item 2 from file: 73)

DIALOG(R) File 73:EMBASE

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8029881 EMBASE No: 91059085

Mapping the receptor site for charybdotoxin, a pore-blocking potassium channel inhibitor

MacKinnon R.; Heginbotham L.; Abramson T.

Department of Cellular and Molecular Physiology, Harvard Medical School,
Boston, MA 02115 USA

NEURON (USA) , 1990, 5/6 (767-771) CODEN: NERNE ISSN: 0896-6273

LANGUAGES: English

The Shaker K⁺ channel belongs to a family of structurally related *voltage*-activated* cation* channels* that play a central role in cellular electrical signaling. By studying multiple site-directed mutants of the Shaker K⁺ channel, a region that forms the binding site for a pore-blocking scorpion toxin has been identified. The region contains a sequence that is highly conserved among cloned K⁺ channels and may contribute to the formation of the ion conduction pore.

2/3,AB/10 (Item 3 from file: 73)

DIALOG(R) File 73:EMBASE

7586396 EMBASE No: 90015515

Identification of P(2Y) purinoceptors associated with *voltage*-
activated *cation* *channels* in cardiac ventricular myocytes of the rat
Bjornsson O.G.; Monck J.R.; Williamson J.R.

Department of Biochemistry and Biophysics, University of Pennsylvania,
37th and Hamilton Walk, Philadelphia, PA 19104-6089 USA

EUR. J. BIOCHEM. (Germany, Federal Republic of) , 1989, 186/1-2 (395-404)
CODEN: EJBCA ISSN: 0014-2956

LANGUAGES: English

Extracellular ATP has vasodilatory and inotropic effects in the heart. We have demonstrated that extracellular ATP, in a concentration-dependent manner (10 nM-0.1 mM), increased $(Ca^{2+})_i$ in suspensions of isolated fura-2-loaded rat cardiac ventricular myocytes (maximum 96 plus or minus 10% increase over basal levels, SEM, $n = 12$, $P < 0.01$). The increase in $(Ca^{2+})_i$ was often biphasic, with an initial fast phase (< 1 s) of low amplitude, followed by a slower phase of higher amplitude. A second application of ATP had little effect, and ATP abolished the effect of subsequent electrical stimulations, even through the cells were still able to respond with an increase in $(Ca^{2+})_i$ to KCl-induced depolarization or stimulation by caffeine. Pretreatment of cells with nifedipine, verapamil, caffeine, ryanodine, or 8-(N,N-diethylamino)octyl 3,4,5-trimethoxybenzoate hydrochloride attenuated the effect of extra-cellular ATP on $(Ca^{2+})_i$, and binding of extracellular free calcium by excess EGTA completely abolished the effects of extracellular ATP and electrical stimulation. Extracellular ATP increased bisoxonol fluorescence in ventricular myocytes, indicating depolarization of the sarcolemma. Pretreatment of the myocytes with tetrodotoxin (50 μ M), or replacement of NaCl in the incubation buffer with the impermeant cation N-methyl-D-glucamine, suppressed the extracellular ATP effect on $(Ca^{2+})_i$. ADP and AMP had smaller effects on $(Ca^{2+})_i$ than ATP; adenosine had no effect. ATP analogues showed the following rank order of potency in increasing $(Ca^{2+})_i$ or bisoxonol fluorescence: ATP greater than or equal to 2-methylthioATP greater than or equal to adenosine 5'-O-(3-thio)triphosphate > adenosine 5'-(α , β -methylene)triphosphate similar adenosine 5'-(β , γ -methylene)triphosphate similar adenosine 5'-(β , γ -imino)triphosphate > adenosine. These data are consistent with the presence of purinoceptors (P(2Y) subtype) on the sarcolemma of cardiac ventricular myocytes of the rat, which upon activation lead to depolarization and activation of cation channels of the sarcolemma and flux of extracellular Ca^{2+} into the cells. This may result in further flux of Ca^{2+} into the cytosol from intracellular stores. The effects of extracellular ATP on $(Ca^{2+})_i$ in rat cardiac ventricular myocytes may, in part, explain the direct inotropic effects of extracellular ATP on the mammalian heart.

2/3,AB/11 (Item 1 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)
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10934759 BIOSIS Number: 97134759

A reevaluation of the structure in the pore region of *voltage*-
activated *cation* *channels*

Schetz J A; Anderson P A V

Whitney Lab., 9505 Ocean Shore Blvd., St. Augustine, FL 32086, USA

Biological Bulletin (Woods Hole) 185 (3). 1993. 462-466.

Full Journal Title: Biological Bulletin (Woods Hole)

ISSN: 0006-3185

Language: ENGLISH

Print Number: Biological Abstracts Vol. 097 Iss. 007 Ref. 084634

Members of the Voltage-Sensitive Cation Channel (VSCC) superfamily form highly selective voltage-gated pores in excitable membranes. These pores are thought to be formed from the extracellular loops that interconnect transmembrane segments 5 and 6 in each of the four domains that constitute the channel. Each of these loops is currently modeled as consisting of two short segments, SS1 and SS2, that are linked by a hairpin turn to form an antiparallel structure. In this study, the hypothesized beta-turn in the S5-S6 loop of each of 80 domains from the VSCC superfamily (26 different channel isoforms) were identified and located on the basis of their significant local maxima for beta-turn propensity (P-bend). Significant beta-turns were identified in all 80 sequences, but they are shifted, and lie in the region currently defined as the SS2 beta-strand. This location of the beta-turn is incompatible with an anti-parallel beta-sheet structure of the pore. The region identified here as forming the turn corresponds to the ion selective determinants in the pore, implying that the turn imparts some of the ionic selectivity of each channel.

2/3,AB/12 (Item 2 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)
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7394887 BIOSIS Number: 89045906

IDENTIFICATION OF P-2Y PURINOCEPTORS ASSOCIATED WITH *VOLTAGE*-
ACTIVATED *CATION* *CHANNELS* IN CARDIAC VENTRICULAR MYOCYTES OF THE RAT

BJORNSSON O G; MONCK J R; WILLIAMSON J R

DEP. BIOCHEM. AND BIOPHYS., UNIV. PA., 37TH AND HAMILTON WALK,
PHILADELPHIA, PA. 19104-5089, USA.

EUR J BIOCHEM 186 (1-2). 1989. 395-404. CODEN: EJBCA

Full Journal Title: European Journal of Biochemistry

Language: ENGLISH

Extracellular ATP has vasodilatory and inotropic effects in the heart. We have demonstrated that extracellular ATP, in a concentration-dependent

manner (10 nM-0.1 mM), increased $[Ca^{2+}]_i$ in suspensions of isolated fura-2-loaded rat cardiac ventricular myocytes (maximum 96 \pm 10% increase over basal levels, SEM, n = 12, p < 0.01). The increase in $[Ca^{2+}]_i$ was often biphasic, with an initial fast phase (< 1 s) of low amplitude, followed by a slower phase of higher amplitude. A second application of ATP had little effect, and ATP abolished the effect of subsequent electrical stimulations, even though the cells were still able to respond with an increase in $[Ca^{2+}]_i$ to KCl-induced depolarization or stimulation by caffeine. Pretreatment of cells with nifedipine, verapamil, caffeine, ryanodine, or 8-(N,N-diethylamino)octyl 3,4,5-trimethoxybenzoate hydrochloride attenuated the effect of extracellular ATP on $[Ca^{2+}]_i$, and binding of extracellular free calcium by excess EGTA completely abolished the effects of extracellular ATP and electrical stimulation. Extracellular ATP increased bisoxonol fluorescence in ventricular myocytes, indicating depolarization of the sarcolemma. Pretreatment of the myocytes with tetrodotoxin (50 μ M), or replacement of NaCl in the incubation buffer with the impermeant cation N-methyl-D-glucamine, suppressed the extracellular ATP effect on $[Ca^{2+}]_i$. ADP and AMP had smaller effects on $[Ca^{2+}]_i$ than ATP; adenosine had no effect. ATP analogues showed the following rank order of potency in increasing $[Ca^{2+}]_i$ or bisoxonol fluorescence: ATP > gtorsim. > 2-methylthioATP > mchgt. > adenosine 5'-O-[3-thio]triphosphate > adenosine 5'-[α , β -methylene]triphosphate \approx adenosine 5'-[β , γ -methylene]triphosphate \approx adenosine 5'-[β , γ -imino]triphosphate > adenosine. These data are consistent with the presence of purinoceptors (P2Y subtype) on the sarcolemma of cardiac ventricular myocytes of the rat, which upon activation lead to depolarization and activation of cation channels of the sarcolemma and flux of extracellular Ca^{2+} into the cells. This may result in further flux of Ca^{2+} into the cytosol from intracellular stores. The effects of extracellular ATP on $[Ca^{2+}]_i$ in rat cardiac ventricular myocytes may, in part, explain the direct inotropic effects of extracellular ATP on the mammalian heart.

2/3,AB/13 (Item 1 from file: 351)
DIALOG(R)File 351:DERWENT WPI
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010762873 WPI Acc No: 96-259828/26
XRAM Acc No: C96-082320

Co-expression of *voltage*-activated* cation* channel* alpha and beta sub-units - esp. para and tip E sub-units of Drosophila voltage activated sodium channel protein in biologically active form
Patent Assignee: (MERI) MERCK & CO INC; (UYN Y) UNIV NEW YORK STATE
Author (Inventor): ARENA J P; FENG G; HALL L M; LIU K; VAN DER PLOEG L H T; WANG P; WARMKE J W
Patent Family:

CC Number	Kind	Date	Week
WO 9615220	A1	960523	9626 (Basic)

Priority Data (CC No Date): US 337339 (941110)

Applications (CC,No,Date): WO 95US14378 (951106)

Abstract (Basic): WO 9615220 A

A recombinant active *voltage*-activated* *cation* *channel* (A), comprising an alpha (pref. para) and a beta subunit (pref. tip E), is new. Also claimed are (1) a protein functioning as (A); (2) DNA (I) encoding (A), having the 6513 nucleotide sequence given in the specification; (3) an expression vector contg. (I); and (4) a host cell contg. the vector of (3) or one or more cloned genes encoding (A);

USE - Recombinant host cells expressing the Drosophila para voltage-activated sodium channel are useful in the isolation and purification of the para *voltage* *activated* *cation* *channel* protein in biologically active form. DNA encoding para voltage-activated sodium channels are useful for the prodn. of antisense mols. which block expression of the gene. Using the recombinant expression systems it was shown that functional expression of Drosophila para voltage-activated sodium channels requires the co-expression of the para alpha subunit with tip E beta subunit.

Dwg.1/4

2/3,AB/14 (Item 2 from file: 351)

DIALOG(R)File 351:DERWENT WPI

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010762608 WPI Acc No: 96-259563/26

XRAM Acc No: C96-082143

XRPX Acc No: N96-218386

Mono-specific antibodies to *voltage*-activated* *cation* *channel* - also new cation channel DNA, useful for identifying channel modulators, potentially useful partic. as insecticide and neuroprotective agents

Patent Assignee: (MERI) MERCK & CO INC

Author (Inventor): VAN DER PLOEG L H T; WARMKE J W

Patent Family:

CC Number	Kind	Date	Week
WO 9614860	A1	960523	9626 (Basic)
US 5550049	A	960827	9640

Priority Data (CC No Date): US 338702 (941110)

Applications (CC,No,Date): WO 95US14262 (951106)

Abstract (Basic): WO 9614860 A

Monospecific antibodies (MAb) reactive with (pref. blocking) a *voltage*-activated* *cation* *channel* are new. Also new are: (1) a method for identifying cpds. (I) that modulate such channels by measuring their effect on recombinant cells that express channel protein; and (2) modulators identified this way. A DNA sequence of 6513

bp (reproduced in the specification) encoding the para voltage-activated sodium channel of Drosophila is new. Expression vector contg. this DNA and recombinant host cells contg. the vector are also new.

USE - Modulators (agonists or antagonists) of Drosophila para voltage-activated sodium channel are useful as insecticides and arachnicides, esp. in infection or infestation with invertebrates, partic. in domestic animals or livestock or to control insects on crops and trees, but more generally to control nematodes, fungi and ectoparasites. Also selective channel antagonists may be useful as neuroprotective agents for treatment of stroke, head injuries and other ischaemic events. The recombinant cells are used to detect the modulators and MAb are useful as immunopurification agents for the para protein.

Dwg.0/4

Abstract (US): 9640 US 5550049 A

A DNA molecule characterized having the 6513 nucleotide sequence given in the specification.

Dwg.0/4

?

769511

E#	FILE	FREQUENCY	TERM
---	----	-----	----
E1	USPAT	2	HALL, LEWIS W JR/IN
E2	USPAT	2	HALL, LEWIS WILLIAM/IN
E3	USPAT	0 -->	HALL, LINDA/IN
E4	USPAT	1	HALL, LINDA F/IN
E5	USPAT	3	HALL, LINDA M/IN
E6	USPAT	1	HALL, LISA NAOMI/IN
E7	USPAT	3	HALL, LLOYD E/IN
E8	USPAT	1	HALL, LLOYD T III/IN
E9	USPAT	1	HALL, LLOYD V/IN
E10	USPAT	2	HALL, LON E/IN
E11	USPAT	1	HALL, LORING C/IN
E12	USPAT	1	HALL, LORNA B/IN

=> s e5

L1 3 "HALL, LINDA M"/IN

=> t cit 1-5

3 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET
SIZE
ENTER ANSWER NUMBER OR RANGE (1):1-3

1. 5,688,917, Nov. 18, 1997, Process for functional expression of the
para cation channel; Joseph P. Arena, et al., 530/350; 428/402.2; 435/4,
69.1 [IMAGE AVAILABLE]

2. 5,593,864, Jan. 14, 1997, Process for functional expression of the
para cation channel; Joseph P. Arena, et al., 435/69.1, 325, 348, 356,
357, 364, 365, 367 [IMAGE AVAILABLE]

3. 5,593,862, Jan. 14, 1997, Nucleic acids encoding drosophila tipE
cation channel proteins and recombinant expression of the same; **Linda**
M. Hall, et al., 435/69.1, 252.3, 254.11, 320.1, 325, 348; 536/23.5
[IMAGE AVAILABLE]

1. 5,688,917, Nov. 18, 1997, Process for functional expression of the para cation channel; Joseph P. Arena, et al., 530/350; 428/402.2; 435/4, 69.1 [IMAGE AVAILABLE]
2. 5,593,864, Jan. 14, 1997, Process for functional expression of the para cation channel; Joseph P. Arena, et al., 435/69.1, 325, 348, 356, 357, 364, 365, 367 [IMAGE AVAILABLE]
3. 5,593,862, Jan. 14, 1997, Nucleic acids encoding **drosophila tipE** cation channel proteins and recombinant expression of the same; Linda M. Hall, et al., 435/69.1, 252.3, 254.11, 320.1, 325, 348; 536/23.5 [IMAGE AVAILABLE]
4. 5,550,049, Aug. 27, 1996, Process for identifying para cation channel modulators; Leonardus H. T. Van Der Ploeg, et al., 435/356, 252.3, 254.11, 320.1, 361, 364; 536/23.5 [IMAGE AVAILABLE]

> d his

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      (FILE 'USPAT' ENTERED AT 16:07:22 ON 15 OCT 1997)
L1      1310 S CALCIUM CHANNEL?
L2      1476 S DROSOPH?
L3      18 S L2 AND L1
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1. 5,672,682, Sep. 30, 1997, Conotoxin peptide PVIIA; Heinrich Terlau, et al., 530/324, 300 :IMAGE AVAILABLE:
2. 5,658,781, Aug. 19, 1997, Insecticidally effective peptides; Karen J. Krapcho, et al., 435/6, 252.3, 320.1, 325, 348, 349, 418; 536/23.5, 24.3 :IMAGE AVAILABLE:
3. 5,658,563, Aug. 19, 1997, Insecticidally effective peptides; Karen J. Krapcho, et al., 424/93.2; 435/172.3, 320.1 :IMAGE AVAILABLE:
4. 5,652,111, Jul. 29, 1997, Binding assay utilizing a nucleic acid encoding apamin binding protein; Patricia Tyson Sokol, et al., 435/7.1, 6, 69.1, 252.3, 320.1; 536/23.5 :IMAGE AVAILABLE:
5. 5,637,470, Jun. 10, 1997, Screening array using cells expressing recombinant .alpha. and .beta. subunits of the mammalian large-conductance (maxi-K) potassium channel; Gregory J. Kaczorowski, et al., 435/7.21, 29, 69.1; 536/23.5 :IMAGE AVAILABLE:
6. 5,607,843, Mar. 4, 1997, Nucleic acid sequence encoding apamin binding protein; Patricia T. Sokol, et al., 435/69.1, 7.1, 7.2, 252.3, 320.1; 536/23.5 :IMAGE AVAILABLE:
7. 5,599,673, Feb. 4, 1997, Long QT syndrome genes; Mark T. Keating, et al., 435/6, 91.1, 91.2; 436/94; 536/23.1, 23.5, 24.3, 24.31, 24.33, 25.3, 25.32; 935/3, 5, 77, 78 :IMAGE AVAILABLE:
8. 5,591,824, Jan. 7, 1997, Porcine apamin binding protein/receptor; Mohammad R. Ziai, et al., 530/350; 435/69.1; 536/23.5 :IMAGE AVAILABLE:
9. 5,519,115, May 21, 1996, Reverse antimicrobial peptides; Claudio Mapelli, et al., 530/324, 325, 326 :IMAGE AVAILABLE:
10. 5,516,890, May 14, 1996, Biologically mimetic synthetic ion channel transducers and methods of making the same; John Tomich, et al., 530/326, 327, 328, 329, 330, 331 :IMAGE AVAILABLE:
11. 5,516,655, May 14, 1996, Multiple drug resistance gene of Aureobasidium pullulans; Robert B. Peery, et al., 435/69.1, 252.3, 254.11, 320.1; 536/23.74 :IMAGE AVAILABLE:
12. 5,461,032, Oct. 24, 1995, Insecticidally effective peptides; Karen J. Krapcho, et al., 514/12; 435/69.1 :IMAGE AVAILABLE:
13. 5,403,574, Apr. 4, 1995, Evaluation and treatment of the multidrug resistance phenotype; David R. Piwnicka-Worms, 424/1.65; 436/57, 63; 514/492, 836 :IMAGE AVAILABLE:
14. 5,401,835, Mar. 28, 1995, Human erythroid p55 nucleic acids; Athar H. Chishti, 536/23.2; 435/6; 536/23.5, 24.31 :IMAGE AVAILABLE:
15. 5,401,652, Mar. 28, 1995, Nucleic acid sequence encoding apamin receptor protein; Patricia T. Sokol, et al., 435/348, 6, 252.3, 320.1, 365, 419; 536/23.5, 24.31; 935/6, 22, 66 :IMAGE AVAILABLE:
16. 5,368,712, Nov. 29, 1994, Biologically mimetic synthetic ion channel transducers; John Tomich, et al., 204/403; 435/4, 817; 436/151, 501, 806 :IMAGE AVAILABLE:

17. 5,281,693, Jan. 25, 1994, Isolation of spider toxins; J. R. Hunter Jackson, et al., 530/324, 855 :IMAGE AVAILABLE:

18. 5,041,376, Aug. 20, 1991, Method for identifying or shielding functional sites or epitopes of proteins that enter the exocytotic pathway of eukaryotic cells, the mutant proteins so produced and genes encoding said mutant proteins; Mary J. Gething, et al., 435/172.3, 7.21, 7.6, 172.1; 935/50, 76 :IMAGE AVAILABLE:

13/3,AB/2 (Item 2 from file: 155)
DIALOG(R) File 155:MEDLINE(R)
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08276144 95292335

Purification of Tetrahymena **telomerase** and cloning of genes encoding the two protein components of the enzyme.

Collins K; **Kobayashi R**; **Greider CW**

Cold Spring Harbor Laboratory, New York 11724, USA.

Cell (UNITED STATES) Jun 2 1995, 81 (5) p677-86, ISSN 0092-8674

Journal Code: CQ4

Contract/Grant No.: GM43080, GM, NIGMS

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Telomerase is a ribonucleoprotein DNA polymerase that catalyzes the de novo synthesis of telomeric simple sequence repeats. We describe the purification of **telomerase** and the cloning of cDNAs encoding two protein subunits from the ciliate Tetrahymena. Two proteins of 80 and 95 kDa copurified and coimmunoprecipitated with **telomerase** activity and the previously identified Tetrahymena **telomerase** RNA. The p95 subunit specifically cross-linked to a radiolabeled telomeric DNA primer, while the p80 subunit specifically bound to radiolabeled **telomerase** RNA. At the primary sequence level, the two **telomerase** proteins share only limited homologies with other polymerases and polymerase accessory factors.

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14, 18
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APS

1. 5,580,987, Dec. 3, 1996, Process for preparing 1-aminoacetamidopyrroles; Lawrence L. Martin, et al., 548/475 [IMAGE AVAILABLE]
2. 5,576,446, Nov. 19, 1996, 1-amino-2-(substituted)pyrroles and related compounds; Lawrence L. Martin, et al., 548/517, 518, 539, 540, 557 [IMAGE AVAILABLE]
3. 5,576,323, Nov. 19, 1996, Excitatory amino acid receptor antagonists; Lawrence J. Heinz, et al., 514/277, 345, 351, 359, 381, 384, 461, 473, 561, 562 [IMAGE AVAILABLE]
4. 5,576,205, Nov. 19, 1996, Kainate-binding human CNS receptors of the EAA1 family; Rajender Kamboj, et al., 435/240.2, 240.4, 252.3, 320.1; 536/23.5, 24.31 [IMAGE AVAILABLE]
5. 5,574,144, Nov. 12, 1996, Kainate-binding, human CNS receptors of the EAA4 family; Rajender Kamboj, et al., 536/23.5; 435/240.2, 320.1; 536/24.31 [IMAGE AVAILABLE]
6. 5,562,907, Oct. 8, 1996, Method to prevent side-effects and insensitivity to the therapeutic uses of toxins; Stephen S. Arnon, 424/236.1, 130.1, 141.1, 142.1, 150.1, 164.1, 167.1, 239.1, 542 [IMAGE AVAILABLE]
7. 5,550,049, Aug. 27, 1996, Process for identifying para **cation** **channel** **modulators**; Leonardus H. T. Van Der Ploeg, et al., 435/240.1, 252.3, 254.11, 320.1; 536/23.5 [IMAGE AVAILABLE]
8. 5,534,521, Jul. 9, 1996, Benzimidazole compounds; Daniel L. Flynn, et al., 514/290, 284, 289, 296; 546/71, 72, 74, 75, 76, 79, 98, 99; 548/312.1 [IMAGE AVAILABLE]
9. 5,527,703, Jun. 18, 1996, DNA encoding glutamate gated chloride channels; Doris F. Cully, et al., 435/252.3, 320.1; 536/23.5 [IMAGE AVAILABLE]
10. 5,523,323, Jun. 4, 1996, Use of partial agonists of the NMDA receptor to reduce opiate induced tolerance and dependence; Maria-Luisa Maccacchini, 514/531, 561, 567 [IMAGE AVAILABLE]
11. 5,521,193, May 28, 1996, Benzimidazole compounds; Daniel L. Flynn, et al., 514/290, 294, 387; 546/79, 94; 548/305.1 [IMAGE AVAILABLE]
12. 5,519,032, May 21, 1996, Substituted aminothienopyridines,

pharmaceutical composition and use; Richard C. Effland, et al., 514/301, 307; 546/114 [IMAGE AVAILABLE]

13. 5,494,792, Feb. 27, 1996, Kainate-binding, human CNS receptors of the EAA2 family; Rajender Kamboj, et al., 435/4, 69.1, 240.2; 436/501; 530/350 [IMAGE AVAILABLE]

14. 5,493,027, Feb. 20, 1996, Anticonvulsive agents and uses thereof; Alfred C. Nichols, et al., 546/156, 159 [IMAGE AVAILABLE]

15. 5,492,825, Feb. 20, 1996, Mammalian inward rectifier potassium channel cDNA, IRK1, corresponding vectors, and transformed cells; Lily Y. Jan, et al., 435/240.2, 69.1, 252.31, 254.11, 320.1; 536/23.5 [IMAGE AVAILABLE]

16. 5,476,933, Dec. 19, 1995, Azepine synthesis via a diels-alder reaction; John F. W. Keana, et al., 540/521, 523 [IMAGE AVAILABLE]

17. 5,473,077, Dec. 5, 1995, Pyrrolidinyl di-carboxylic acid derivatives as metabotropic glutamate receptor agonists; James A. Monn, et al., 548/253, 254, 531 [IMAGE AVAILABLE]

18. 5,432,202, Jul. 11, 1995, Use of polyamines as ionic-channel regulating agents; Bruce D. Cherksey, et al., 514/626, 674; 564/197, 512 [IMAGE AVAILABLE]

19. 5,428,069, Jun. 27, 1995, Treating cognition with, aminocyclopropanecarboxylic derivatives; Phil Skolnick, et al., 514/531, 557 [IMAGE AVAILABLE]

20. 5,428,053, Jun. 27, 1995, 1-aminoacetamidopyrroles and 1-amino acetamido-2-(substituted) pyrroles and related compounds; Lawrence L. Martin, et al., 514/422, 343, 423, 426; 546/278.4, 278.7, 279.1; 548/518, 527, 539, 540, 557 [IMAGE AVAILABLE]

21. 5,371,188, Dec. 6, 1994, Neuronal nicotinic acetylcholine receptor compositions; Stephen F. Heinemann, et al., 530/350; 435/6, 69.1, 252.3, 320.1 [IMAGE AVAILABLE]

22. 5,352,587, Oct. 4, 1994, Compositions and methods for the synthesis of natriuretic protein receptor B and methods of use; Ming-Shi Chang, et al., 435/69.1, 172.1, 240.1, 320.1; 514/12; 530/350 [IMAGE AVAILABLE]

23. 5,339,564, Aug. 23, 1994, Method for control and destruction of agricultural pests by coherent electromagnetic excitation; Steve D. Wilson, et al., 43/124, 107 [IMAGE AVAILABLE]

24. 5,328,847, Jul. 12, 1994, Thin membrane sensor with biochemical switch; George D. Case, et al., 205/778; 204/403; 422/68.1, 69; 435/287.1, 287.2, 817 [IMAGE AVAILABLE]
25. 5,300,512, Apr. 5, 1994, Benzimidazole compounds; Daniel L. Flynn, et al., 514/305; 546/133 [IMAGE AVAILABLE]
26. 5,280,028, Jan. 18, 1994, Benzimidazole compounds; Daniel L. Flynn, et al., 514/294; 546/93, 94 [IMAGE AVAILABLE]
27. 5,274,116, Dec. 28, 1993, 1-aminoacetamidopyrroles and 1-aminoacetamido-2-(substituted)pyrroles and related compounds; Lawrence Martin, et al., 548/465; 546/277.1 [IMAGE AVAILABLE]
28. 5,252,581, Oct. 12, 1993, Substituted aminothienopyridines, pharmaceutical composition and use; Richard C. Effland, et al., 514/301; 546/114 [IMAGE AVAILABLE]
29. 5,242,947, Sep. 7, 1993, Use of polyamines as ionic-channel regulating agents; Bruce D. Cherksey, et al., 514/626, 634; 564/197, 240 [IMAGE AVAILABLE]
30. 5,193,087, Mar. 9, 1993, Electronic digital cross-connect system having bipolar violation transparency; Avi Lichtash, et al., 370/58.2, 65.5; 375/238, 289 [IMAGE AVAILABLE]
31. 5,086,072, Feb. 4, 1992, Treatment of mood disorders with functional antagonists of the glycine/NMDA receptor complex; Ramon Trullas, et al., 514/531, 557 [IMAGE AVAILABLE]

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L2          0 WARMKE, JEFFREY/IN
=> s voltage-activated cation channel
    349216 VOLTAGE
    229658 ACTIVATED

    47437 CATION
    289037 CHANNEL
L3          0 VOLTAGE-ACTIVATED CATION CHANNEL
          (VOLTAGE (W) ACTIVATED (W) CATION (W) CHANNEL)
=> s voltage-activated cation channels
    349216 VOLTAGE
    229658 ACTIVATED

    47437 CATION
    161135 CHANNELS
L4          1 VOLTAGE-ACTIVATED CATION CHANNELS
          (VOLTAGE (W) ACTIVATED (W) CATION (W) CHANNELS)

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4/3/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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09155546 97383231
Functional expression of *Drosophila para* sodium channels.
Modulation by the membrane protein **TipE** and toxin pharmacology.
Warmke JW; Reenan RA; Wang P; Qian S; Arena JP; Wang J; Wunderler D; Liu
K; Kaczorowski GJ; Van der Ploeg LH; Ganetzky B; Cohen CJ
Department of Genetics and Molecular Biology, Merck Research
Laboratories, Rahway, New Jersey 07065, USA.
J Gen Physiol (UNITED STATES) Aug 1997, 110 (2) p119-33, ISSN
0022-1295 Journal Code: I8N
Contract/Grant No.: GM-43100, GM, NIGMS
Languages: ENGLISH
Document type: JOURNAL ARTICLE

4/3/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
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08425688 96016095
Cloning and functional analysis of **TipE**, a novel membrane protein
that enhances *Drosophila para* sodium channel function.
Feng G; Deak P; Chopra M; Hall LM
Department of Biochemical Pharmacology, State University of New York at
Buffalo 14260-1200, USA.
Cell (UNITED STATES) Sep 22 1995, 82 (6) p1001-11, ISSN 0092-8674
Journal Code: CQ4
Contract/Grant No.: NS16204, NS, NINDS
Languages: ENGLISH
Document type: JOURNAL ARTICLE

4/3/3 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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PATENT ASSIGNEE:
SUMITOMO CHEMICAL COMPANY LIMITED, (214342), 5-33, Kitahama 4-chome,
Chuo-ku, Osaka-shi, Osaka 541, (JP), (applicant designated states:
BE;DE;FR;GB;IT;NL)
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Yamamoto, Shigeki, 2-40, Hirata-1-chome, Ibaraki-shi, (JP)

LEGAL REPRESENTATIVE:

VOSSIUS & PARTNER (100314), Siebertstrasse 4, 81675 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 631180 A1 941228 (Basic)
EP 631180 B1 971217
APPLICATION (CC, No, Date): EP 94109555 940621;
PRIORITY (CC, No, Date): JP 93149086 930621; JP 9428464 940225
DESIGNATED STATES: BE; DE; FR; GB; IT; NL
INTERNATIONAL PATENT CLASS: G03C-007/12;
ABSTRACT WORD COUNT: 95

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9712W2	637
CLAIMS B	(German)	9712W2	625
CLAIMS B	(French)	9712W2	755
SPEC B	(English)	9712W2	3334
Total word count - document A			0
Total word count - document B			5351
Total word count - documents A + B			5351

4/3/4 (Item 1 from file: 351)
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011121542

WPI Acc No: 97-099467/199709

XRAM Acc No: C97-031751

Nucleic acid encoding Drosophila melanogaster **tipE** protein - for
prodn. of recombinant voltage-dependent cation channel

Patent Assignee: UNIV NEW YORK STATE RES FOUND (UYN Y)

Inventor: FENG G; HALL L M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Main IPC	Week
US 5593862	A	19970114	US 94317880	A	19941004	C12N-015/12	199709 B

Priority Applications (No Type Date): US 94317880 A 19941004
Language, Pages: US 5593862 (E, 33)

4/3/5 (Item 1 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)
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12113828 BIOSIS Number: 98713828

Functional expression of Drosophila **para** neuronal sodium channels
is modulated by the membrane protein **tipE**

Warmke J W; Reenan R; Wang P; Arena J; Wang J; Wunderler D; Liu K;
Kaczorowski G; Van Der Ploeg L; Ganetzky B; Cohen C J

Merck Res Lab., Rahway, NJ 07065, USA

Biophysical Journal 70 (2 PART 2). 1996. A320.

Full Journal Title: 40th Annual Meeting of the Biophysical Society,
Baltimore, Maryland, USA, February 17-21, 1996. Biophysical Journal

ISSN: 0006-3495

Language: ENGLISH

Document Type: CONFERENCE PAPER

Print Number: Biological Abstracts/RRM Vol. 048 Iss. 004 Ref. 060010

4/3/6 (Item 2 from file: 5)
DIALOG(R)File 5:BIOSIS PREVIEWS(R)

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11930713 BIOSIS Number: 98530713

The **tipE** gene of *Drosophila melanogaster* encodes a novel membrane protein required for expression of **para** sodium channels in *Xenopus* oocytes

Hall L M; Feng G; Chopra M

Dep. Biochem. Pharmacol., SUNY at Buffalo, Buffalo, NY 14260, USA

Society for Neuroscience Abstracts 21 (1-3). 1995. 1823.

Full Journal Title: 25th Annual Meeting of the Society for Neuroscience, San Diego, California, USA, November 11-16, 1995. Society for Neuroscience Abstracts

ISSN: 0190-5295

Language: ENGLISH

Document Type: CONFERENCE PAPER

Print Number: Biological Abstracts/RRM Vol. 047 Iss. 012 Ref. 200588